



"...meeting community needs...enhancing quality of life."

MEMO

TO: CEA Review Committee

FROM: Paula Vandehey, Director of Public Works *PAV*

DATE: September 15, 2016

SUBJECT: Request to purchase and add to the CEA Fleet in 2017, a passenger vehicle with an estimated cost of \$30,000, to be used as the Parking Utility Enforcement Vehicle.

The Downtown Parking Study, completed in 2015, included many recommendations that have been implemented over the past 18 months. One of the recommendations is to purchase a parking enforcement vehicle that uses camera technology to enforce time limit zones. Appleton currently has miles of time limit zones throughout the City. We are also planning to create a new time limit zone within the Lawrence University neighborhood, which is one of two neighborhoods recommended in the Downtown Parking Study (see attached map).

The vehicle we are requesting to purchase recognizes infracting vehicles by using a combination of license plate and vehicle recognition technology to accurately determine plate, color, contour and length of each scanned vehicle. Using GPS technology vehicles staying beyond the allowed time limit are located and documented.

Communities currently using this technology (see attached article from the City of Madison) state that enforcement of time limit zones is significantly more efficient than the old chalk technology and court appearances are almost non-existent as the photos speak for themselves.

The upfront cost of the outfitted vehicle is \$98,000 which includes \$30,000 for the passenger vehicle and \$68,000 for the cameras and associated equipment and software technology.

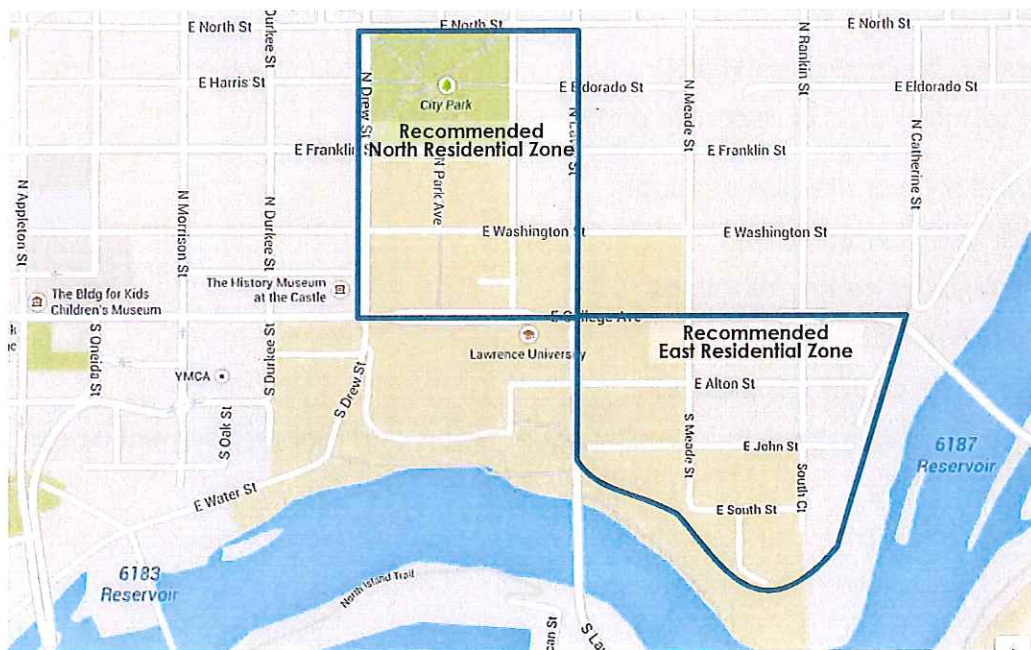
Therefore, we request to purchase and add to the CEA Fleet in 2017, a passenger vehicle with an estimated cost of \$30,000, to be used as the Parking Utility Enforcement Vehicle.

Attachments

NEW ENFORCEMENT AREAS

Representatives from the City and Lawrence University understand that neighborhood parking challenges can be successfully addressed through a combined approach that requires cooperation between the City and University. Walker recommends the City consider the following changes to enforcement policies and areas.

1. Implement a neighborhood parking zone that limits on-street parking to 2-hours, from 9:00 am – 6:00 pm, Monday – Friday.
2. Two enforcement zones are recommended
North Residential Zone: Inside study area - bounded by North Street to the north, College Avenue to the south, Lawe Street to the east, and Durkee Street to the west.
East Residential Zone: Outside study area - generally bounded by College Avenue to the north, Fox River to the south and east, and Lawe Street to the west.



City enforcement staff would be required to expand current enforcement routes and routinely monitor on-street parking in the North and East Residential Zones. Improvements in enforcement technology may enable the City to integrate the additional zones without incurring additional labor costs. The City and University would need to routinely measure the impact of the residential parking zones and make policy and program adjustments, as needed.

Virtual chalk

Madison's parking enforcement is a high-tech operation

by Steven Potter

April 21, 2016



Steven Potter

The city uses two sophisticated “autoChalk” vehicles to monitor cars.

If you ever park on a downtown street, the city knows. In fact, one of the city's two “autoChalk” vehicles has likely snapped photos of your car.

Outfitted with two pairs of protruding cameras, a couple of contour-measuring lasers, a large GPS antenna and an onboard computer with imaging and symbol-recognizing software, the two autoChalk vehicles are hard to miss.

In use since 2009, the vehicles let workers “virtually chalk” cars much more quickly and easily than doing it by hand. The old-fashioned method required parking officers to hang halfway out of a car window while marking parked cars’ tires with a long chalk stick. If the chalk mark remained in the same position after the two-hour time limit, a \$35 ticket could be issued.

With the automated system, officers can virtually chalk cars at more than 10 times the manual rate, while recording the location, time and license plate of each vehicle.

On a recent outing, parking enforcement officer Jake Powers demonstrates the system by scanning 30 cars on one side of South Hancock Street. “That would’ve taken about 10 minutes doing it manually,” Powers says. “With [the autoChalker], it takes us less than a minute.”

City workers occasionally still use the manual system, like when the autoChalk vehicles are being worked on. “This is just so effortless in comparison,” Powers says.

After making a loop in a given area, the autoChalk system stores images taken of the side profile of the car and the license plate. It also notes the car’s location using GPS.

Once the two-hour parking limit has passed, the officer makes a second loop. During these follow-up loops, the vehicle uses a laser to search for similar contours of cars and matching license plate symbols. It’s like facial recognition software for cars. The vehicle also takes another set of pictures.

If a violator is discovered, the system beeps in recognition. With the second set of images and data recorded, the parking officer then pulls off the road to double-check the images.

“It does occasionally screw up; that’s why we check each car,” says Powers, pointing out that the system monitoring cars on Hancock Street ID’d a sedan and a minivan as the same car. “The human element is still absolutely needed.”

Rain and snow can obscure the images. “If I don’t have good, clean images, I’m not going to write the ticket,” says Powers. “If there’s no way to be absolutely certain, I skip it.”

To increase accuracy, “we try to mimic the speed, distance from the parked cars and take the same path on the second pass,” says Powers. Although Powers usually drives 20 miles per hour while scanning, he says the system can work at up to 55 miles an hour. “I have no idea why you’d want to do that, but we can,” he says.

Stefanie Niesen, the city's parking enforcement supervisor, says the photos are kept only until the end of the day. "autoChalk may be able to access them at a later date if needed," she says. "The photos of the vehicles cited are kept for at least seven years."

In the six years the city has been using the autoChalk system, only a couple of tickets have been successfully challenged in court thanks to the two sets of pictures taken.

The system can also be used to scan for stolen cars or parking ticket scofflaws, but that's fairly rare, as it can't be done simultaneously with the parking checker, and it drastically slows down the system, says Powers.

It cost \$121,000 to outfit a Jeep and Ford Escape SUV with autoChalk systems, which are manufactured and maintained by Tannery Creek Systems in Ontario.

Another benefit of the autoChalk system is that it's more clandestine than the manual method, Niesen says. "If they don't see us, they don't know we're out there because there's no chalk on the tire."

- See more at: <http://isthmus.com/news/news/autochalk-vehicles-parking-enforcement/#sthash.uULAABvE.dpuf>