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September 28, 2016

Robert G. Donovan, Chairman
Public Safety Committee
Common Council
City Hall, Room
200 East Wells Street
Milwaukee, WI 53202

Via facsimile (414) 286-3456 and email to rdonov@milwaukee.gov

RE: File # 160669, relating to acceptance and funding of a 2015 ShotSpotter Program grant.

Dear Chairman Donovan,

We know some things about gunshot detections systems. But there is a lot that council members and the public do not know. Until you and the public get answers feel free to accept the state grant you are considering in File # 160669, but do not spent additional Milwaukee tax dollars on ShotSpotter.

We know the following:

- Gunshot detection systems, such as Shotspotter, may help improve law enforcement when they are used within certain parameters as part of a multi-faceted strategy.
- They are popular with politicians and others frustrated by obstacles to addressing gun violence, such as the proliferation of semi automatic weapons and the generous legal protections afforded those carrying guns.
- Like many types of law enforcement technology, gunshot detection systems are given a pass by most of the media, who appeared to be impressed by the manufacturers' claims, without any independent means to verify those claims. One example of a serious review of ShotSpotter in Milwaukee is a May 10, 2016 story on Wisconsin Public Radio. See: <http://www.wpr.org/milwaukee-committed-shotspotter-outcomes-data-remain-elusive>
- ShotSpotter, a brand of SST, Inc., is expensive; multiple \$100,000s for equipment and installation and then roughly \$40,000 for maintenance and service per square mile annually.

What don't we know about Shotspotter in Milwaukee?

- We don't know how accurate ShotSpotter is.

In testimony given by Captain David Salazar and Dan Rotar before the Finance and Personnel Committee on May 18, 2016, MPD indicated that when ShotSpotter was first rolled out in 2010 a study found that of the 84% of the detections that were confirmed, there were corresponding 911 calls only 16% of the time. In 2015 when a similar study was done the percentage of corresponding 911 calls was 50%. Did the public change its behavior so that they made 200% more 911 calls reporting gunfire? Did the expansion of the coverage area from 2 to 12

square miles by 2015 have an effect on the disparity between detections and corresponding 911 calls? Or did ShotSpotter change its setup or analysis to be more accurate? If ShotSpotter is more accurate that's great, but we don't know.

There is no reason to believe that there have been fewer false positives in Milwaukee than in other jurisdictions. In Newark, New Jersey, for example, "since 2010 [thru 2013], 75 percent of the gunshot alerts have been false alarms. But police are often deployed to the location anyway, just in case there is a shooter." See: <http://www.wnyc.org/story/311533-gunshot-detection-sensors-newark-result-17-arrests-over-three-years/>

- We don't know how effective ShotSpotter might be.

Since 2010 MPD maintains that "arrests have been made directly as a result of the ShotSpotter system." How many arrests? In testimony given by Captain David Salazar and Dan Rotar before the Finance and Personnel Committee on May 18, 2016, MPD was unable to answer repeated requests by members for the number of arrests and the number of crime guns recovered as a direct result of ShotSpotter.

MPD would rather talk about how ShotSpotter is used for surveillance and crime analysis purposes. ShotSpotter, however, has limitations. Captain Salazar, the head of MPD's Intelligence Fusion Center (IFC), told committee members that ShotSpotter information can't be used when IFC crime analysts take other census tract data to create heat maps. As of May the IFC has been able to determine the frequency of gunfire at the parcel level (within range of existing sensors) to help develop targeting strategy. Apparently, the IFC used alerts reported by ShotSpotter, instead of the actual data reported by sensors to ShotSpotter.

Milwaukee's data is considered proprietary by SST, Inc., which may monetize it for sale to federal agencies. In the meantime, independent researchers without the company's source code and adequate data are unable to verify ShotSpotter's accuracy and efficacy.

- We don't know how the sounds of voices recovered by the acoustic sensors are used.

There have been instances where the voices of gunshot victims have been recorded and used as evidence in court, so there is no doubt that ShotSpotter records voices. The question is when and for how long are voice recordings made? The sensors are constantly recording audio and when there is an explosion-like noise the audio snippets are transmitted to the ShotSpotter review center in California. The audio is locally stored by the sensors for perhaps 48 hours. The problem is that the length of recordings, retention period, and access to the recording could all be manipulated without council members, much less the public knowing. We have to rely on the company and MPD adhering to their contracts, privacy policy and terms of service. Is the contract available to council members and the public?

Gunshot detection technology, like many surveillance technologies used by law enforcement, promises a lot. The ACLU of Wisconsin is not opposed to the appropriate and constitutional use of technology. However, before the city purchases surveillance technology it must do a better job of vetting and explaining the technology to elected officials and their constituents. ShotSpotter may be a good example of how Milwaukee enters into contracts that send us down a path of toward unpredictable results, unintended consequences, and spirally obligations, but without more information, including the contract, how are we to know? To some extent the same could be said for automated license plate readers, cell site simulators, data fusion software, and the costly Tiburon police records management system.

The ACLU of Wisconsin urges you to get answers to the many questions we have raised about Milwaukee's use of ShotSpotter. And for the future, please improve the way that MPD purchases surveillance technology so that it is more transparent and it allows council members and the public to have better input.

Please share this letter with your colleagues and post it to File # 160669.

Thank you.

Sincerely yours,

A handwritten signature in blue ink, appearing to read "Chris Ahmuty". The signature is fluid and cursive, with a long horizontal stroke at the end.

Chris Ahmuty, Executive Director

cc: Ald. Milele Coggs
Ald. Michael Murphy
Nancy Olson
MaryNell Regan
Chuck Burki
Captain Mark Stanmeyer