



Windsor Heights Fire Dept.

1133 66th Street
Windsor Heights, Iowa 50324

Office: 515-279-9450

Fax: 515-279-7760

MEMO

To: Jeff Fiegenschuh, City Administrator
From: Christopher Cross, Fire Chief
CC: Mayor Jerry Sullivan, WH City Council
Date: August 30, 2013
Re: Repairs to traffic preemption system

Traffic signal preemption is a type of system that allows the normal operation of traffic lights to be preempted, often to assist emergency vehicles. The most common use of these systems is to manipulate traffic signals in the path of an emergency vehicle, stopping conflicting traffic to allow emergency vehicle right-of-way, to help reduce response times, and enhance traffic safety. Our system has lapsed into disrepair.

I feel it is imperative that we make repairs and regularly maintain our traffic preemption system. There are traffic preemption devices installed on the following intersections:

- 73rd Street and I-235
- 73rd Street and Buffalo Rd
- 73rd Street and University Ave.
- University Avenue and Hy-Vee Entrance
- 70th Street and University Ave
- 66th Street and University Ave

Of the intersections listed, approximately 50% of the intersections failed to operate (*see attached testing report and memo to public works*). As a result of the last pedestrian traffic fatality in the intersection of 70th Street and University, a concerted effort was undertaken to bring our intersections into ADA compliance and ensure their functionality to alleviate liability of the City and provide a safer environment for citizens. This effort needs to continue by maintaining our traffic preemption system.

In 2006, West Des Moines fire engine was involved in a crash that killed a 16 year old girl. The engine was responding to an incident, approached an intersection where their preemption system failed to actuate the light, resulting in the teen's death. (<http://www.firehouse.com/news/10503050/traffic-light-failed-in-fatal-crash-involving-iowa-fire-truck>)

The role of the Fire Chief is to lead and facilitate the community risk reduction process. Emergency response is one element in the risk reduction strategy. Not only is it a community risk for civilians, but also a significant risk to police and fire responders. In 2012, 81 firefighters were killed in action. 18.5% of those killed were killed needlessly while responding.

We can do our part to reduce the community risk if our equipment designed to protect citizens and responders is properly repaired and adequately maintained.

The Windsor Heights Fire Department's mission is to deliver excellent EMS and Fire service to the public through continuous training, rapid response, public education and fire prevention.



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MEMO

To: Jason VanAusdall, Public Works Director
From: Christopher Cross, Fire Chief
CC:
Date: June 3, 2013
Re: Preemption Testing Results

There are 6 intersections within the City of Windsor Heights that are equipped with the traffic preemption system. The intersections and preemption testing results are listed below.

- **73rd/University (N,S,E,W)**
 - Fail in all directions
- **73rd/Buffalo Road (N,W,E,W)**
 - Fail in all directions
- **73rd/I-235 WB on ramp (N,S)**
 - Functional in all directions. Control gained of signal in all directions with white light indicator.
- **University/66th (N,S,E,W)**
 - Fail in all directions
- **University/70th (N,S,E,W)**
 - Functional in all directions. Control gained of signal in all directions with white light indicator. **No indicator displayed when going South Bound on 70th Street.** Most likely a bulb needs to be replaced.
- **University/HyVee entrance (N,S,E,W)**
 - Functional in all directions. Control gained of signal in all directions with white light indicator.

The system was tested with the siren from the Fire Chief's command car with the siren on the "yelp" setting.

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Moving forward, I recommend that we begin to budget for the purchase and installation of a newer preemption technology using an LED light source emitter. 3M manufactures a product called the "Opticom" that would allow all police and fire vehicles to take control of the traffic signal using light rather than sound while responding to emergencies. Also, the public works vehicles (snow plows) could also be in the system as a secondary or non emergency user of the traffic preemption system. By installing emitters on the plows, it would allow your drivers to keep moving and not be slowed down by traffic signals. I am unsure on the cost of the system, but I think it would be worth investigating.



City of Windsor Heights Fire Department

Quarterly Traffic Signal Preemption Test

Traffic Signal Receiver Tests

Date: JUNE 2, 2013

Intersection	North		South		East		West		Comments
	Y	N	Y	N	Y	N	Y	N	
73 rd /University	Y	N	Y	N	Y	N	Y	N	0%
73 rd /Buffalo	Y	N	Y	N	Y	N	Y	N	0%
73 rd /I-235 WB Ramp	Y	N	Y	N					100%
University/66 th	Y	N	Y	N	Y	N	Y	N	EB Green & Light WB Light 0%
University/70 th	Y	N	Y	N	Y	N	Y	N	W-Green & Light 100%
University/HyVee	Y	N	Y	N	Y	N	Y	N	100%

~~REMOVED~~

Confirmation Light

Cross

0000 - 0045

Tests Conducted by: