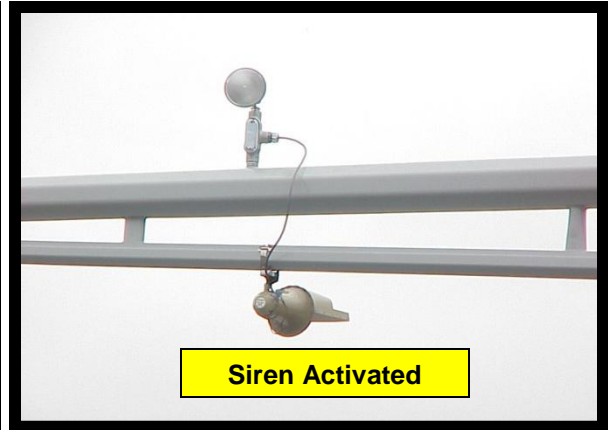
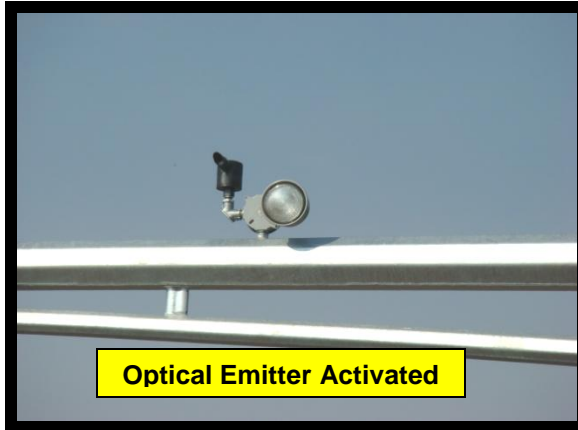


EMERGENCY VEHICLE PREEMPTION (EVP)



OPTICAL EMITTER ACTIVATED EVP SYSTEM



The optical emitter activated type EVP system consists of four main components: detector, confirmation light, emitter, and phase selector.

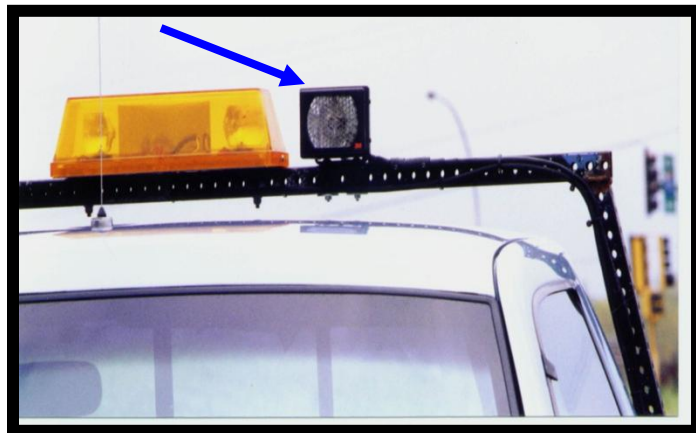


The detector mounted on the traffic signal mast arm receives the optical communication and transmits the message to the phase selector.



At this time, a confirmation light mounted on the mast arm will be activated as a solid light. The other three directions will also activate to a flashing condition.

The emitter on the emergency vehicle which makes direct visual communication with the detector via an optically coded high intensity strobe light.



The phase selector mounted inside the traffic signal cabinet checks the condition of the signal coming from the emergency vehicle, then it either holds the green light for the approaching emergency vehicle, or accelerates the normal cycle to provide a green light by the time the emergency vehicle reaches the intersection.

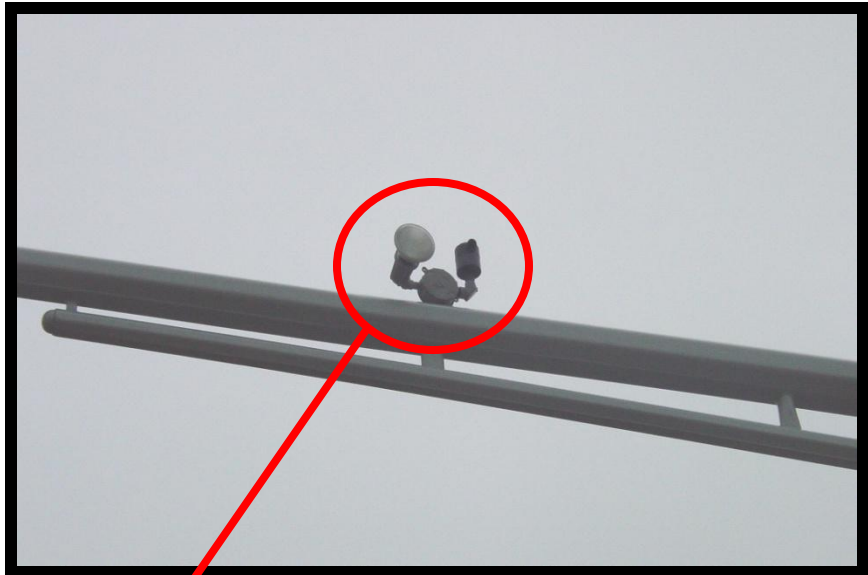


As soon as the emergency vehicle has cleared the intersection, the traffic signal will return to its normal operation.

THE CABLES USED FOR THIS SYSTEM ARE:

Verify light: A 3 conductor, number 14 (3/C #14) from the signal cabinet to pole transformer base (pole base connector or terminal block) to the verify light.

Detector Unit: A 3 conductor number 20 (3/C #20) continuous (without splices) from EVP detector mounted on the mast arm or top of a pedestal pole.....



.... to the terminals in the signal cabinet.

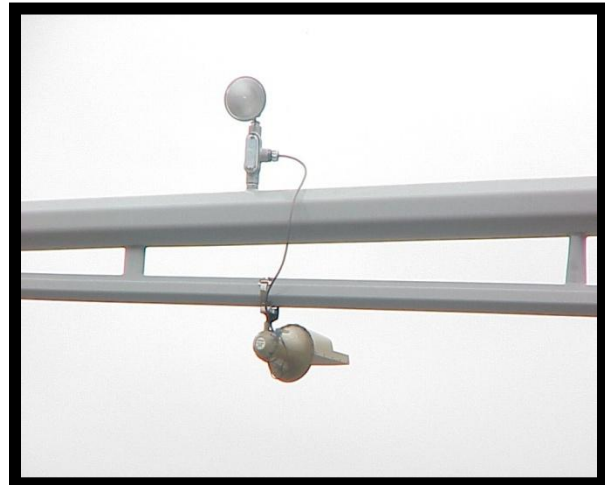


When the signal system is placed in operation by the District Traffic Office, the timing and ranges of the EVP system will be adjusted and made operational.

SIREN ACTIVATED EVP SYSTEM

A siren activated system consists of three main components: microphone type detector, verify light, and a controller card in the traffic signal cabinet.

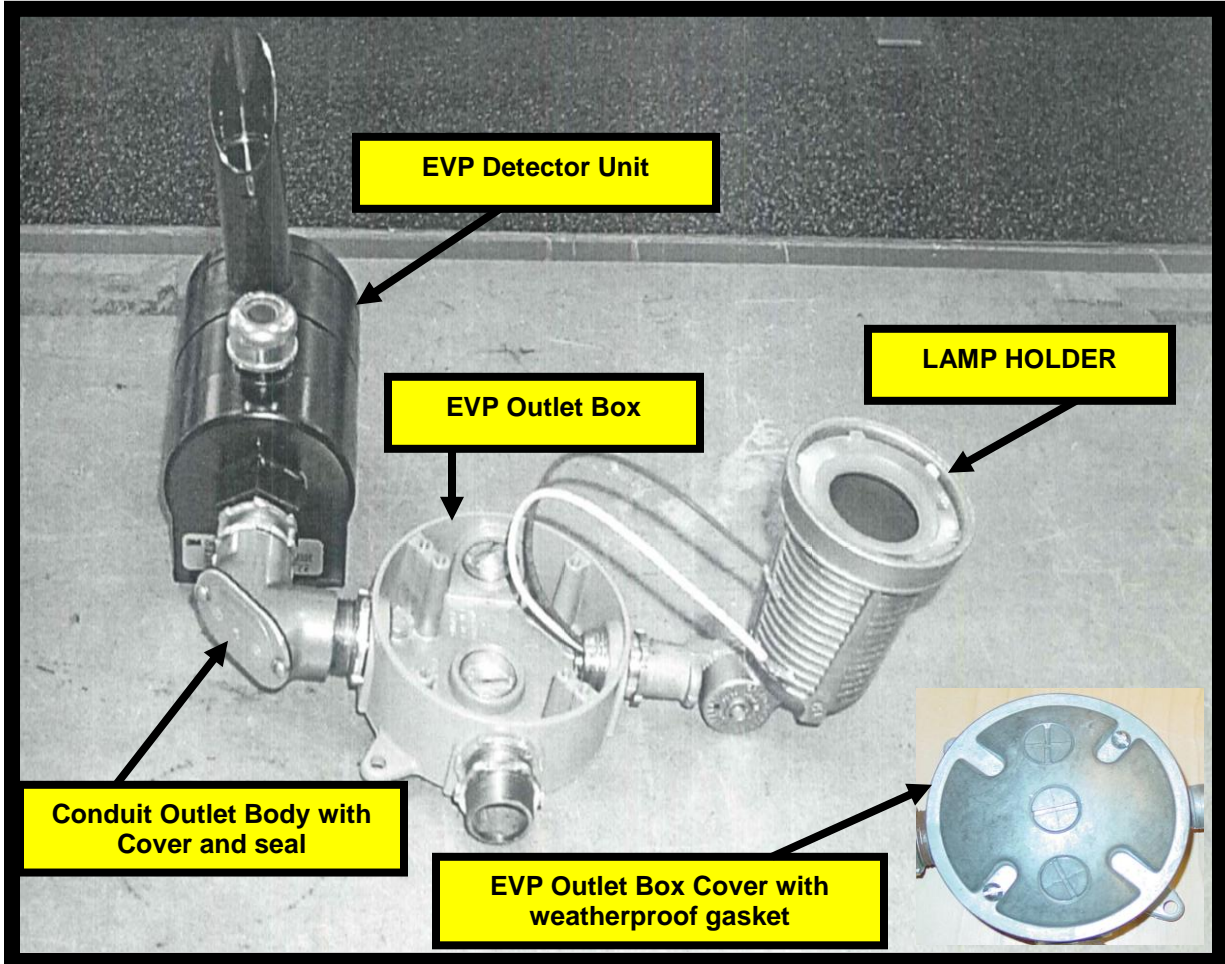
The siren activated system does not require the use of an operator initiated emitter to obtain a green light at the signal. The emergency vehicle's siren activates the EVP system.



All specifications for a siren activated EVP system are contained in the Contract documents. Mn/DOT only allows the use of the siren activated EVP system outside of the eight (8) County Metro Area.

The Contract documents will specify which type of EVP system is required on the project.

For optical emitter activated systems, Mn/DOT now requires specific EVP mounting equipment for mast arm and pedestal mounting as specified in the Contract documents.



Emergency vehicle preemption (EVP) systems (both emitter activated and siren activated) and EVP verify lamp holders must be Mn/DOT approved and are listed on the Mn/DOT Approved Products List (APL) for Signals.

ENFORCEMENT LIGHT

Mn/DOT is currently having enforcement lights installed by the Contractor at signalized intersection upon Agency requests. The intent of the enforcement light is to aid law enforcement in helping to reduce the incidence of crashes at signalized intersections.



Mn/DOT is currently developing statewide policy on the use and installation of this device.