DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
INTRADEPARTMENTAL CORRESPONDENCE

TRAFFIC ENGINEERING DIVISION

PO Box 94245 / Baton Rouge / LA / 70804-9245

225-242-4631

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MEMORANDUM

TO: **Mr. Richard Savoie, PE**
DOTD Chief Engineer

FROM: **Mr. Peter A. Allain, PE, PTOE**
Traffic Engineering Division Administrator

SUBJECT: **Photo Enforcement Permits**

DATE: **March 31, 2010**

The purpose of this memorandum is to request approval to allow the Department to issue permits for the installation of photo enforcement systems on the state highway network. This office has determined that it would be in the best interest of the safety of our highways to allow local governments to operate photo enforcement equipment in the state owned highway right-of-way.

Through the attached policy, the Department will regulate the site selection, installation, and operation of these permits to ensure that the photo enforcement systems function to improve safety. The policy was developed as a joint effort between the Department and members of the Louisiana Municipal Association to provide statewide consistency in the use of photo enforcement.

This policy replaces all other polices and memorandums issued on this subject. This memorandum and policy will be attached to all new permits and become part of the permit conditions. Copies of this policy will be forwarded to all districts. Copies will also be sent to the cities of Lafayette and Baton Rouge, which hold existing permits.

Attachment
cc: Louisiana Municipal Association
Secretary Sherri LeBas
Ms. Connie Standige
Each District Administrator
Each District Traffic Operations Engineer

RECOMMENDED FOR APPROVAL _____ DATE _____

RECOMMENDED FOR APPROVAL _____ DATE _____

RECOMMENDED FOR APPROVAL _____ DATE _____

Richard Savoie _____ 3-31-10
APPROVED DATE

Louisiana Department of Transportation and Development
Traffic Engineering Division

TRAFFIC ENFORCEMENT SYSTEMS ON STATE HIGHWAY RIGHTS-OF-WAY

I. **Definitions:** The following are hereby defined for this document.

Intersection shall mean the place or area where two or more streets intersect; defined by the stop bars or if no stop bars are present, the area created by the projection of the curb lines through the intersection on curb and gutter streets and/or by the projection of the edge of pavement through the intersection of the crossing streets.

Owner shall mean the owner of a vehicle as shown on the vehicle registration records of the Louisiana Department of Public Safety, Office of Motor Vehicles, or the analogous department or agency of another state or country.

Electronic Traffic Signal Enforcement System or Enforcement System shall mean a system:

a. Consisting of an electronic/camera system installed to work in conjunction with an electrically operated traffic-control signal; and
b. Is capable of producing at least two recorded images depicting the rear of a vehicle that is not operated in compliance with the red-displays of the traffic-control signal. The license plate data shall be discernible from at least one of the images.

Electronic Vehicle Speed Enforcement System or Enforcement System shall mean a system:

a. Consisting of an electronic/camera system; which is
b. Capable of producing at least one recorded image depicting the rear of a vehicle that is being operated at a speed in excess of the posted speed limit. The license plate data shall be discernable from the image.

Recorded Image for Electronic Traffic Signal Enforcement Systems means an image recorded by a photographic traffic monitoring system depicting the rear of a vehicle and is automatically recorded as a photograph or digital image, which also depicts the recorded speed, duration the signal was red, date, location, and time of the recorded image.

Recorded Image for Electronic Vehicle Speed Enforcement Systems means an image recorded by a photographic traffic monitoring system depicting the rear of a vehicle and is automatically recorded as a photograph or digital image, which also depicts the recorded speed, date, location, and time of the recorded image

System location means the approach to an intersection where an Electronic Traffic Signal Enforcement and/or the site where an Electronic Vehicle Speed Enforcement System is directed and in operation.

Traffic control signal shall mean a traffic control device displaying alternating red, amber, and green lights directing traffic when to stop at or proceed through an intersection.

Traffic violation defined – Red Light Running - A vehicle which proceeds past the trailing edge of an installed stop bar of a signalized approach into the intersection when the Traffic Control Signal for that vehicle's direction of travel is emitting a steady red signal indication shall be considered a red light running violation. A vehicle owner is subject to issuance of a civil notice of violation, except where the vehicle facing a steady red signal cautiously enters the intersection to turn right after stopping, and after stopping the vehicle yields the right–of-way to pedestrians lawfully within an adjacent crosswalk and to other traffic lawfully using the intersection.

Traffic violation defined – Speeding - Vehicles which exceed the posted speed limit and are traveling at a recorded speed as identified in the speed enforcement tables identified within this document shall be considered a speeding violation and are subject to issuance of a civil notice of violation.

II. Purpose

The purpose of this document is to provide guidance for the Louisiana Department of Transportation and Development (DOTD) in issuing permits to local governments for the installation of electronic traffic enforcement monitoring systems on state highway rights-of-way. Automated enforcement systems are designed to enhance safety and promote compliance with traffic laws. The DOTD permit gives the local governing authority and or its designated agent permission to install, maintain, and operate stationary and mobile enforcement systems on state rights-of-way. The use of these devices is the choice of the local government as part of their authority to enforce traffic laws.

This policy shall become effective for all new photo enforcement permits. Existing permits shall expire 18 months after the issuance of this policy if the permitted installation is determined by the DOTD not to be in compliance with the guidelines contained herein. The DOTD shall notify the Applicant of non compliant permitted locations, a minimum of 90 calendar days prior to the expiration of the 18 month period, to allow the Applicant to come into conformance to these guidelines. New and or amended permits may be issued once conformance to these guidelines is determined by DOTD.

III. Permits

The DOTD will, by "permit," allow the installation of electronic traffic enforcement systems in communities for the express purpose of reducing traffic violations and crashes. Communities which choose to employ electronic traffic enforcement shall engage a qualified professional engineering consultant to prepare the permit and perform the required traffic engineering studies, field verification, and specified inspection(s).

Potential permit locations shall be submitted to the DOTD District for initial review and verification of crash histories. If the locations are accepted by the District, the applicant may submit the permit form, local documentation, engineering reports, and plans for review and recommendation of approval by the District. The District shall forward the permits to the headquarters Traffic Engineering Division for review. The Traffic Engineering Division will forward the permits to the DOTD Permits Engineer for approval and issuance. The applicant may begin construction upon receipt of the issued permit.

The permits shall be submitted on the DOTD Traffic Control Device Permit Form. A copy of this form is available on the DOTD web site at:
http://www.dotd.la.gov/highways/maintenance/maintmgt/row_docs/Traffic_Control_Device_Permit_fillable.pdf

The permits shall be issued or denied within 30 business days after delivery receipt of the permit application within the DOTD permit offices. The DOTD shall identify the reasons for rejecting any permit applications. The permittee will have an opportunity to resubmit a revised application to comply with the requirements identified by the DOTD. The permits shall only be authorized to local governments which have traffic regulation with enforcement authority. After the permit is issued, the District shall ensure the equipment is installed and operated in accordance with the approved permit.

The permit applications shall include the following:

1. Local Authority - The permit shall include documentation from the local government indicating the existence of a legal instrument authorizing the use of electronic enforcement within the municipality or parish and documentation from the chief law enforcement officer of the municipality or parish requesting and/or supporting the use of automated traffic enforcement monitoring systems. These documents shall include within them the definitions and standards of enforcement for civil notices of violations.

2. Locations
   a. Monitored ***Electronic Traffic Signal Enforcement System*** intersections shall be selected based primarily on vehicle/pedestrian traffic crashes. Red Light enforcement is a safety tool intended to improve safety, therefore for a signal to justify installation of this safety countermeasure, the signal must have five crashes of the type susceptible to correction by red light cameras within the most recent 12 month period.

   b. Monitored ***Electronic Speed Enforcement System-*** The Department shall issue permits for specific sites for speed enforcement. Identified sites shall consider locations where:
      i. A speed ***limit study verifies the posted speed*** limit has been established based upon an engineering study in accordance with acceptable transportation engineering principles and practices, and .
      ii. There is adequate space to safely park a mobile electronic enforcement vehicle, and
      iii. There are a minimum of two standard speed limit signs with supplemental Photo Enforced plaques in advance of the electronic speed enforcement site location.

3. Speed Tolerance – For ***Electronic Vehicle Speed Enforcement Systems*** it is recognized a notice of violation shall be issued only after allowing an enforcement tolerance above the posted speed limit which has been established by the DOTD. This enforcement tolerance shall be in accordance with the following two tables and should be identified within the authorizing ordinance of the political entity, one for School Zones, and one for Non School Zones. Using these tables as an example, the Owner of a vehicle would receive a violation if the vehicle is traveling at a speed in miles per

hour (mph) greater than the posted speed limit in accordance with the following tables at a System Location. The following tables reflects the minimum speed tolerances for various posted school zones which shall be utilized for DOTD permitted Electronic Vehicle Speed Enforcement Systems for School Zones and Non-School Zones:

Posted Speed Limit	Minimum Speed When Violation Issued in a School Zone	Minimum Speed When Violation Issued
15	≥ 21	≥ 21
20	≥ 26	≥ 26
25	≥ 31	≥ 31
30	≥ 36	≥ 36
35	≥ 41	≥ 43
40	≥ 46	≥ 48
45	≥ 51	≥ 55
50	≥ 58	≥ 60
55	≥ 63	≥ 65
60		≥ 70
65		≥ 75
70		≥ 80

4. Red Light Equipment Response Tolerance- Tolerances for red light enforcement shall not be less than 0.40 seconds.

5. Engineering Report – As part of the ***Electronic Traffic Signal Enforcement System*** permit approval process, a licensed professional traffic engineer shall evaluate and include as part of the permit/report, specific recommendations which include, but are not limited to the following:

   a. ***Speed Enforcement*** - An analysis of existing vehicle speeds and their distribution shall be provided. The report on speeds shall include compilation of recorded speeds in non peak time periods of no less than 2 hours, and no less than 200 vehicle speeds are to be collected. The data shall be compiled to identify the 50th%, 85th%, speeds and the 10 mph pace of the vehicles stream where speed enforcement is being considered. The engineer may recommend continuation of the posted speed limit or a modification of the posted speed limit as part of the required report on this subject. The DOTD will determine if the speed limit needs to be modified and shall initiate action to cause this to occur before implementing electronic speed control enforcement. The DOTD will not unreasonably delay modifying speed limits under this condition by posting the revised speed limits within 45 calendar days of the delivery/receipt of the permit within the DOTD permit office.

   b. ***Electronic Traffic Signal Enforcement Systems*** of Red Light Running – A report signed and sealed by a Louisiana registered professional engineer shall be prepared. The report shall determine if the traffic signal meets or exceeds the minimum design requirements of the MUTCD, the DOTD Traffic Signal Design manual, and the standards contained in this policy.

i. The change and clearance interval (yellow and all red time) for signal phases shall be determined and implemented under the permit as follows and shall be part of the engineering report:

Based on Traffic Engineering Handbook
$CP = t + [V/(2a + 64.6g)] + [(W + L) / V]$
where:
CP = non-dilemma change period (Change + Clearance interval) (in sec)
t = perception–reaction time in seconds (nominally 1 sec)
V = approach speed in ft/sec
g = percent grade (positive for upgrade, negative for downgrade)
a = deceleration rate, typically 10ft/sec^2
W = distance from trailing edge of stop bar to far side of intersection extension of curb lines of cross street (in feet)
L = length of vehicle in feet (typical 20 ft)

ii. Whenever the change period exceeds five seconds, an all-red clearance interval shall be utilized beyond the five seconds. However, if this occurs, the red light citations shall not be issued during the entire calculated change period which includes the all-red clearance.

iii. All signal faces shall utilize LED-type indications to increase "target" value of the displays. Regulatory and/or warning signs approaching an enforcement system shall be visible and legible.

iv. New stop bars are to be installed or repaired to "like new" condition and located in accordance with the MUTCD and turning paths.

v. A red light running violation shall be defined as occurring whenever a vehicle driver proceeds past the trailing edge of the stop bar after the display of a steady red indication and enters the intersection.

vi. Once operational, the permittee or its designated agent shall notify the DOTD the traffic signal installation is functioning as designed, and all detectors are working properly and indicate the specific time and date the system will commence electronic enforcement.

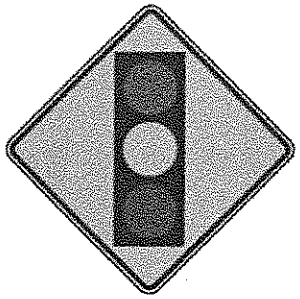
6. Plans - The permit application shall include plans stamped by a Louisiana professional engineer for each installation. These plans shall include the location of traffic enforcement system equipment, and the location of the required notice signing. Connection to the traffic signal circuits shall utilize optically isolated switches. The enforcement equipment will sense traffic signal phase changes by monitoring current flow, and not by communication with the signal controller or being directly wired to the signal conductors. Monitoring of the signal conductors may occur within or outside of the traffic controller cabinet with all wires clearly labeled. Wires shall be enclosed in appropriate conduit or installed overhead in accordance with DOTD signal standard details.

7. Signing - Signs indicating traffic compliance is being enforced electronically may be placed at the jurisdictional limits of the local government, and shall be installed at a minimum on each approach to the location where a traffic enforcement monitoring device is in operation. Signs at the municipality limits shall be the R10-18 as shown in the MUTCD, or an approved alternate. The details of each sign assembly and location

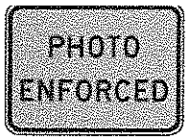
of same shall be depicted in the supporting engineering report as part of the permit application for electronic enforcement systems as noted in this document.

a. Signs for Electronic Traffic Signal Enforcement – Appropriate warning signs shall be installed on the approaches to the intersection where red light running is being monitored. These black on yellow background signs (W3-3 and W16-10 assembly), signs shall be installed between 400 and 1,000 feet from the approach being monitored. Similar signs may be installed for non monitored approaches when at least one of the approaches utilizes electronic enforcement systems. Additional warning signs may be mounted adjacent to traffic signal heads and or mounted on traffic signal standards mast arms.

R10-18



W3-3*



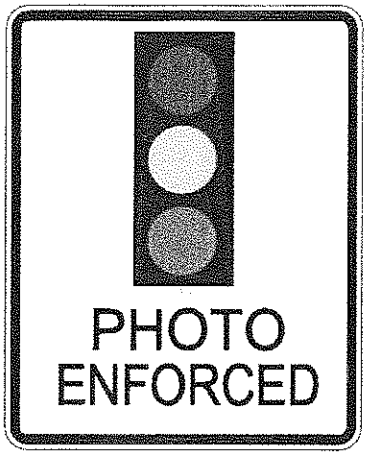
W16-10

Install at municipality Limits

Install Where Red Light and /or Speeding is Monitored at a signal

b. Signs for Electronic Traffic Signal Enforcement with Electronic Speed Enforcement- In addition to the signs required above, a speed limit sign shall be installed on the mast arms or span wires and on the to an intersection approach utilizing electronic speed enforcement. The supplemental plaque (R10-19) shall be placed below the speed limit sign (R2-1).

c. Electronic Speed Enforcement – Locations which are monitored by stationary or mobile speed enforcement shall have a minimum of two standard speed limit signs (R2-1) with supplemental Photo Enforced plaques (R10-19) in advance of the electronic speed enforcement site location.



Installed Where Red Light Enforcement Is Monitored On Mast Arms or Signal Span Wires

(R2-1 and R10-19)
Installed Where Speeding Enforcement Is Monitored On Mast Arms, Signal Span Wires, or on ground

7. System Testing Plan - The local government and/or its designated agent shall provide tests for accuracy at devices at regular intervals. Each such test shall be made in accordance with the manufacturer's recommended procedure. Records shall be maintained indicating the results of each test. Such test results shall be public records subject to inspection. If any such device fails to meet the manufacturer's minimum accuracy requirements, such traffic enforcement system shall be removed from service and thereafter shall not be activated until it has been serviced and validated.

8. Reporting – The permittee shall prepare an annual traffic crash summary report for the preceding calendar year which shall be prepared and submitted to both the DOTD District and Traffic Engineering Division, no later than July 1st of each year. This report shall summarize the number of reported traffic crashes within 200 feet of the stop bar of each approach of the permitted locations, using available traffic crash data. The report shall contain an analysis of available traffic crash reports noting the differences, if any, prior to the activation of the permitted locations and a similar period after activation of the electronic enforcement equipment.

IV. System Operation

Maintenance Repair of Damaged Enforcement Equipment - The City/Parish or its designated agent agrees to respond timely to reports of traffic enforcement system damage through any

licensed local contractor or an authorized agent for that City or Parish, as a result of a traffic crash or other activity which disturbed the equipment from its permitted location. Other infrastructure repairs are anticipated to be completed within three calendar days upon notification by the public or the DOTD. The permittee shall hold the DOTD harmless for damages or injuries arising from the installation of the traffic enforcement system under the permit.

Streaming Video – The DOTD shall be allowed access to available streaming video at the permitted locations, subject to the DOTD providing communications complying with the permittee's and/or their agent's bandwidth and security protocol requirements to aid in traffic monitoring.

V. Removal

If the DOTD determines the permittee is not in compliance with the requirements of the permit, the DOTD shall immediately notify the permittee of the defect in writing. The permittee shall have 10 calendar days from receipt of the DOTD notice to rectify the specified defect and shall notify the DOTD of the resolution. If the permittee fails to correct the defect within the 10 days noted, to the satisfaction of the DOTD, said permit may be cancelled. No new permits shall be issued if an existing permit has been identified for removal, but has not been removed as directed.

If the yearly report indicates the overall number of total injury crashes increases, the DOTD may require that the system be removed. Removal will be considered if recommended by an engineering report that includes all relevant factors which might have contributed to the recorded increase in crashes, including but not limited to changes in nearby or adjacent land use and/or development, traffic volume increases or decreases, and or traffic signal phasing changes during the evaluation periods, etc..

Permits issued for the installation of traffic enforcement systems on state highway rights-of-way shall be contingent upon the local government meeting the requirements of this document. If the DOTD permit is cancelled, the municipality or its designated agent shall remove the equipment installed under the permit within DOTD's rights-of-way.

Any cost to remove traffic enforcement equipment shall be borne by the permittee or its designated agent. The permittee shall restore DOTD rights-of-way to as good as or better than before the permit was issued. Final inspection by the DOTD will be conducted to assure compliance.