## TABLE OF CONTENTS

**DEPARTMENT OF TRANSPORTATION**

1**INFORMATION COLLECTION**

**SUPPORTING STATEMENT**

**USING AUTOMATED LICENSE PLATE READERS (ALPRS) FOR TRAFFIC SAFETY PURPOSES**

**[OMB CONTROL NUMBER]**

**INTRODUCTION**

This is to request the Office of Management and Budget's (OMB) approval for a new three-year clearance for the information collection entitled, Using Automated License Plate Readers for Traffic Safety Purposes.

## PART A. JUSTIFICATION – BRIEF DESCRIPTION OF STUDY

In this study, NHTSA will gather information on and provide insight into law enforcement agencies' (LEAs) implementation and use of automated license plate readers (ALPR) for traffic safety purposes. ALPR systems automatically capture an image of a vehicle's license plate, transform that image into alphanumeric characters using optical character recognition software, and store that information along with relevant metadata (i.e., geo-location and temporal information, as well as data about the ALPR unit). License plate information can then be compared to searchable databases of plates for any number of purposes, from law enforcement to traffic safety to traffic flow monitoring, to see if a match is detected. This project will collect information from LEA personnel with regard to their knowledge and practice in using ALPRs for traffic safety purposes, with emphasis on its use for detecting drivers with revoked, suspended, or restricted licenses.

The objective of the project is to conduct preliminary qualitative research on the feasibility of using ALPRs as countermeasures to improve traffic safety. This study will document the extent of ALPR use, databases and Hot lists, effectiveness and value, challenges and problems, legal issues, law enforcement and community acceptance and privacy concerns. This project will collect information on knowledge and practice of ALPR for traffic safety through interviews with personnel in LEAs that have been selected as case study sites.

Specific questions that will be addressed in this research study include:

- How are ALPRs being used in the U.S. for traffic safety purposes? In finding answers to this question, we anticipate gathering information on use of ALPR for other purposes.
- What are challenges in ALPR use for this purpose (from U.S. or international sources) and to what extent are they unique to this use e.g., legal issues, privacy concerns, community acceptance?
- What are findings regarding ALPR effectiveness in detecting drivers who have suspended, revoked, or restricted licenses?

## A1. EXPLAIN THE CIRCUMSTANCES THAT MAKE THE COLLECTION OF INFORMATION NECESSARY. IDENTIFY ANY LEGAL OR ADMINISTRATIVE requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

### A1.1 CIRCUMSTANCES MAKING THE COLLECTION NECESSARY

The National Highway Traffic Safety Administration (NHTSA) was established by the Highway Safety Act of 1970 (23 U.S.C. 101) to carry out a Congressional mandate to reduce the mounting number of deaths, injuries and economic losses resulting from motor vehicle crashes on the Nation's highways. Under the Highway Safety Act of 1966, Section 403, the Secretary of Transportation is required to carry out research and demonstration programs.

In addition, MAP-21, the Moving Ahead for Progress in the 21st Century Act of 2012 (P.L. 112-141), was signed into law by President Obama to create a streamlined and performance-based surface transportation program. MAP-21, Subsection 402(c), states that the Secretary, acting through the NHTSA Administrator, shall establish a cooperative program to research and evaluate state highway safety countermeasures. MAP-21 provides that this new cooperative research and evaluation program, the *National Cooperative Research and Evaluation Program* (*NCREP*), is to be administered by NHTSA and jointly managed by NHTSA and the Governors Highway Safety Association (GHSA).

In developing the NCREP Program, NHTSA, in conjunction with GHSA, identified a need to discover and report on the state of knowledge and practice regarding the use of ALPRs for traffic safety purposes, with emphasis on its use for detecting drivers with revoked, suspended, or restricted licenses. Other safety-related uses of ALPR in the U.S. and elsewhere have included identification of vehicles that illegally pass stopped school buses, speed enforcement, and identification of vehicles that have been involved in a high number of crashes (Manson, 2008; Watson and Walsh, 2008).

License sanctions (including suspension, revocation, and restrictions) are widely used to address traffic risks posed by problem drivers. However, license actions are difficult to enforce due to the essentially invisible nature of the offense (Voas, et al, 2008). The difficulty in detecting drivers who have suspended, revoked, or restricted licenses weakens the deterrent value of the laws. Research indicates that many of these drivers continue to drive (McCartt, et al, 2002). Moreover, drivers with license plate sanctions are overrepresented in crashes (Neuman, et al, 2003). A less common method used to address the traffic safety risk posed by drivers with license sanctions is the use of vehicle and license plate sanctions, such as the use of 'zebra' plates (e.g., Oregon and Washington State) and learner's plates/

decal laws (e.g., New Jersey S2314) (Voas, et al, 2008; Neuman, et al, 2003). However, these approaches may be easily evaded through transfers of ownership and may affect the family members of offenders. It is conceivable that ALPRs could be used in conjunction with a 'Hot List' of drivers with suspended, revoked, or restricted licenses to mitigate some of the concerns associated with 'zebra' plates and decals.

To date, several survey efforts have explored the use of ALPRs among LEAs. A 2007 survey found that 19 percent of law enforcement agencies overall were using ALPRs; this percentage increased to 23 percent in a 2009 survey (Roberts and Casanova, 2012). In a follow-up survey with agencies who responded (in the 2009 survey) that they were using ALPRs, about 20 (out of 40) indicated vehicle and traffic enforcement as one of their current ALPR uses. In most cases, this use was not the primary purpose.

An in-depth literature review revealed that LEAs most frequently use ALPR to combat criminal activity (ranging from stolen vehicles to terrorist and gang activity) or to improve collection of fines and fees for parking violations and similar minor infractions (Vermont DPS, 2014; Farrell, 2014; Gierlack,2014; Basich, 2012; Wolfe, 2011). Because traffic safety uses of ALPR are less prevalent overall, there are fewer details and analyses in the literature focusing on practices, effectiveness, policies, or issues relating to ALPR in order to evaluate its potential effectiveness as a countermeasure. This information will be sought in the proposed case study interviews. This research directly supports the DOT strategic goal of Safety.

### A1.2 STATUTE AUTHORIZING THE COLLECTION OF INFORMATION

NHTSA has statutory authority to conduct crash injury research and collect relevant data in the interest of public health. Specifically, NHTSA is authorized to conduct research on all phases of highway safety and traffic conditions; conduct ongoing research into driver behavior and its effect on traffic safety; and conduct research, training, and programs relating to traffic safety (See 23 U.S.C. 403(a)(1), 23 U.S.C. 403 (a)(2), and 23 U.S.C. 403 (a)(9)).

## A2. INDICATE HOW, BY WHOM, AND FOR WHAT PURPOSE THE INFORMATION IS TO BE USED. **Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.**

The data from this study will provide NHTSA with a qualitative knowledge base, including rich, contextual information, from those most knowledgeable about the weaknesses and strengths or barriers and incentives to ALPR use as a traffic safety countermeasure. Information gathered in the case study interviews will be used primarily to (1) document the extent of ALPR use for traffic safety purposes, (2) identify the challenges in ALPR use for this purpose (e.g., funding, human resource, technical, legal, privacy), and (3) provide a preliminary evidence regarding ALPR effectiveness in detecting drivers who have suspended, revoked, or restricted licenses.

NHTSA will share the information with GHSA in order to determine whether there is sufficient evidence on the feasibility of using ALPRs for traffic safety to justify a future quantitative study on the use of ALPRs as a state highway safety countermeasure.

NHTSA reports are available to the general public on our web site. Many of NHTSA's reports are accompanied by a press release. In these cases, the press reports our results to the general public.

## A.3. DESCRIBE WHETHER, AND TO WHAT EXTENT, THE COLLECTION OF INFORMATION INVOLVES THE USE OF AUTOMATED, ELECTRONIC, MECHANICAL OR OTHER TECHNOLOGICAL COLLECTION TECHNIQUES OR OTHER INFORMATION TECHNOLOGY. **Also describe any considerations of using information technology to reduce burden.**

The initial contacts with potential case study sites (LEAs) will be through mail, email, and telephone. The case study interviews will be conducted in-person or via telephone. Given the qualitative nature of this study, it is important that the interviews be conducted by an interviewer (versus an electronic format), so that the interviewer can probe for more information, and ask follow-up questions, as needed. This method will result in a richer, more detailed set of data.

## A.4. DESCRIBE EFFORTS TO IDENTIFY DUPLICATION. **Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.**

This is a new NHTSA study on this topic. An in-depth literature review revealed that there are no previous studies that have collected the necessary information.

The information collected in this study will be unique in that it will collect detailed and nuanced qualitative information on ALPR use for traffic safety purposes, with an emphasis on its use for detecting drivers with revoked, suspended, or restricted licenses. We believe this information collection will help us take a major step forward in our research to evaluate countermeasures for traffic risk posed by problem drivers.

## A.5. IF THE COLLECTION OF INFORMATION INVOLVES SMALL BUSINESSES OR OTHER SMALL ENTITIES, DESCRIBE THE METHODS USED TO MINIMIZE BURDEN.

Interview information for this study will only be collected from individuals working at LEAs. There is no burden on small businesses for this information.

## A.6. DESCRIBE THE CONSEQUENCES TO FEDERAL PROGRAM OR POLICY ACTIVITIES IF THE COLLECTION IS NOT COLLECTED OR COLLECTED LESS FREQUENTLY.

Under MAP-21, NHTSA was charged with establishing a cooperative program, in conjunction with GHSA, to research and evaluate state highway traffic safety countermeasures. This study was identified under this mandate.

Traffic safety risks caused by problem drivers has been a difficult problem to address. Despite the fact that license sanctions (including suspension, revocation, and restrictions) are widely used, they are difficult to enforce due to the invisible nature of the offense. ALPR is a promising technology to overcome this barrier. There is not enough existing information to determine whether the promise of the technology can be fulfilled in practice. This study will provide preliminary qualitative information on the feasibility of using ALPRs for this purpose. On behalf of the states, GHSA specifically requested that this topic be explored. Without the findings from this study, States will be deprived of important information on the feasibility of using ALPRs for traffic safety purposes.

## A.7. EXPLAIN ANY SPECIAL CIRCUMSTANCES THAT REQUIRE THE COLLECTION TO BE CONDUCTED IN A MANNER INCONSISTENT WITH THE GUIDELINES SET FORTH IN 5 CFR 1320.6.

There are no special circumstances that would cause this collection to be conducted in a manner inconsistent with OMB guidelines.

## A.8. PROVIDE A COPY AND IDENTIFY THE DATE AND PAGE NUMBER OF PUBLICATION IN THE FEDERAL REGISTER OF THE AGENCY'S NOTICE, REQUIRED BY 5 CFR 1320.8 (D), SOLICITING COMMENTS ON THE INFORMATION COLLECTION PRIOR TO SUBMISSION TO OMB. **Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments. Describe efforts to consult with persons outside the agency to obtain their views.**

NHTSA published a notice in the *Federal Register* with a 30-day public comment period on December 7, 2016 (Volume 81, Number 235, pages 88317-88318).

NHTSA published a notice in the *Federal Register* with a 60-day public comment period to announce this proposed information collection on April 29, 2016 (Volume 81, Number 83, pages 25759-25760).

There were two comments submitted to Docket Number NHTSA-2016-0051 in response to the 60 Day Federal Register Notice. One comment was sent from Mr. George P. Beach, II, Superintendent of the New York State Police, and the second comment was sent from Mr. Todd Spencer, Executive Vice-President of Owner-Operator Independent Drivers Association (OOIDA). Below are summaries of and responses to the comments.

Comment 1:

NHTSA would like to thank the New York State Police for their comments. The New York State Police expressed strong support for the study. According to Superintendent Beach, "ALPR systems have proven beneficial in many facets of law enforcement and are commonly used for traffic safety purposes, including speed enforcement, in nations worldwide. Understanding how, and to what extent, such technologies are being used in the U.S. is the first step in exploring their safety potential." Superintendent Breach praised NHTSA and GHSA for their leadership on this issue.

Comment 2:

OOIDA requested that NHTSA consider the implications of ALPR technology on independent owners-operators (generally comprised of small business men and women who operate single truck motor carriers). OOIDA recommended that the current study address the following additional topics:

1. **Data accuracy:** How accurate are the data and to what extent do factors such as weather (snow, ice, rain) affect the accuracy of the data?
    a. Relatedly, different ALPR equipment and systems should be assessed across states to ensure that the information is being processed consistently and accurately for enforcement purposes in interstate commerce.
2. **Impact on highway safety**: Has the information collected by LEAs that utilize ALPR improved highway safety? The study should consider comparing the safety outcomes of sites that use ALPR to sites that do not use ALPR. OOIDA stated that the number of citations issued as a result

of ALPRs should not be used as a measure of improvement in highway safety.

3. **Misuse of technology**: In redirecting resources to computer-based enforcement, there may be opportunities for potential misuse of the technology, including privacy issues.
4. **Process for challenging a violation**: What reasonable due process exists for drivers who receive a citation based on ALPR data? According to OOIDA, the current Data Qs system for challenging a violation is "lacking in objectivity" in many states.

NHTSA would like to thank OOIDA for their comments. The comments seem to refer to the use of ALPR for commercial vehicle enforcement purposes. This is not the purpose of the current study. The current study is a qualitative effort that seeks to report on the feasibility of using ALPRs for traffic safety purposes, with an emphasis on detecting drivers with suspended, revoked, and restricted licenses. The technology has the potential to mitigate the risk of problem drivers (i.e., those for whom license sanctions have been issued). Those persons with license sanctions who continue to operate motor vehicles are difficult to detect because of the invisible nature of the offense. If such a purpose appears feasible, then a more in-depth study would be needed to address this topic in detail, including the issues raised by OOIDA. Having said that, the current study does include questions that OOIDA may find useful, including:

<u>Databases and HOT lists</u>:

- How often is data uploaded to the database or Hot lists?
- How often is the updated data provided to users in the field?
- What issues do you have, if any, with the databases or Hot lists specific to using them for detecting drivers with suspended, revoked, or restricted licenses?

<u>ALPR effectiveness and challenges</u>

- How would you characterize the effectiveness of using ALPRs as a traffic safety treatment?
    - (if applicable): Specifically, how effective is ALPR in detecting drivers who have suspended, revoked, or restricted licenses?
    - Can you provide some examples of its effectiveness (or ineffectiveness) for that purpose?
- What challenges do you face in using ALPR technology for traffic safety purposes? (Probe for technical, operational and institutional challenges)

<u>Community Feedback</u>

- Have you received any feedback from the community regarding the use of ALPRs? If yes – has the feedback been positive, negative or both? Please explain.

<u>Legal and Privacy Issues</u>

- Has your agency run into any legal issues with regard to using ALPRs for traffic safety purposes?
- Has your agency run into any privacy issues with regard to using ALPR for traffic safety purposes? If yes – please tell me about how your agency managed those issues. What steps does your agency take to ensure that privacy of ALPR data is protected?

OOIDA indicated interest in assessing different systems and equipment and in better understanding the process for challenging a violation. These topics, however, are outside the scope of this study.

## A.9. EXPLAIN ANY DECISIONS TO PROVIDE ANY PAYMENT OR GIFT TO RESPONDENTS, OTHER THAN REMUNERATION OF CONTRACTORS OR GRANTEES.

There will be no payment or gift to respondents.

## A.10. DESCRIBE ANY ASSURANCE OF CONFIDENTIALITY PROVIDED TO RESPONDENTS.

An Informed Consent Document, which was approved by the contractor's (Texas A&M Transportation Institute's) Institutional Review Board (IRB) and NHTSA's attorneys, will be provided to each participant with the email notification of their designation as a potential interviewee by the head of the LEA (or his/her designee). The email provides information about the study and the sponsors (see Appendix G). The informed consent will be sent as an attachment to the email. Participants are asked to read the consent form, and if they have any questions about the information on the form, they are asked to contact the Principal Investigator (contact information is provided on the consent form). They may also contact the Texas A&M University Human Subjects Protection Program office. The interviews will be scheduled via email, and during the scheduling the contractor will confirm that the participants do not have any questions about the consent form. The contractor will use a spreadsheet to track whether or not participants agree to participate.

This Consent Document will be sent prior to any questions being asked. The Consent Document states that:

> "TTI researchers and DOT will have access to data collected during and after the study. At the conclusion of the study, these same researchers and DOT may share study data publicly at research conferences, for research purposes (for example, in reports), or in connection with other efforts to improve highway and road safety, and as otherwise required by law, but in so doing, your name, or any other information that personally identifies you, will never be disclosed or associated with your study data."
>
> "The study will collect your name, position and contact information (including telephone number and email address). This personal information will be encrypted and stored securely in password protected files/servers and will not be shared with anyone besides TTI staff working on the study. It will be destroyed immediately after completion of the study. The study also will collect your verbal and/or written responses to interview questions. TTI staff working on the study will assign a case number to each participant and then will remove all identifying information (name and contact information) from all records documenting your verbal responses and/or from your written responses to the interview questions. In this manner, the study data will not identify you personally or contain information that may be used to personally identify you. The list correlating participant case numbers with personal information identifying participants will be stored securely, in encrypted form in password protected files/servers and will not be shared with anyone besides TTI staff working on the study. It will used in the event that TTI staff have follow up questions during the study and will be destroyed immediately after completion of the study."

A draft of the Informed Consent Document, is provided in Appendix A.

## A.11. PROVIDE ADDITIONAL JUSTIFICATION FOR ANY QUESTIONS OF A SENSITIVE NATURE, SUCH AS SEXUAL BEHAVIOR OR ATTITUDES, RELIGIOUS BELIEFS, AND OTHER MATTERS THAT ARE COMMONLY CONSIDERED PRIVATE.

The questionnaires do not contain questions commonly considered sensitive or private.

## A.12. PROVIDE ESTIMATES OF THE HOUR BURDEN OF THE COLLECTION OF INFORMATION ON THE RESPONDENTS.

Participants will be asked to participate in a single interview that will be administered either in-person or by telephone. Interview requests will be sent to 48 participants, and it is expected that 50% will participate, resulting in 24 completed interviews.

The interview will take an average of 40 minutes to complete. The maximum interview burden is 32 hours for the 48 people who will be invited to participate (48 respondents x 40 minutes = 960 minutes or 32 hours). In addition to (and separate from) the interviews, , one person from each agency will be asked to provide additional data elements about ALPRs (e.g., ALPR costs, statistics on effectiveness, agency documentation on ALPR policies and procedures). We anticipate that gathering this data will take (on average) approximately 90 minutes per agency. This creates an additional burden of 18 hours.

Based on the above calculations, the total annual burden hours for this project will be no more than 50 hours. These totals are also displayed in Table 1, below.

**Table 1. Estimated Total Burden.**

| Task | Estimated Burden per Response | Frequency of Response | Number of Respondents | Total Burden Hours |
|---|---|---|---|---|
| Interview | 40 minutes | 1 response | 48 | 32 hours |
| Additional data elements | 90 minutes | 1 response | 1 | 18 hours |
| *Total* | | | | **50 hours** |

Participation in this study is voluntary, and there are no costs to respondents beyond the time spent completing the interview and gathering the follow-up information. However, the cost to respondents could be computed in terms of their hourly wage. Based on mean per capita wage for police and detectives, the maximum total input cost, if all respondents completed interviews while on the job, is estimated as follows:

$28.97 per hour[1] x 50 hours = $1448.50

## A.13. PROVIDE AN ESTIMATE OF THE TOTAL ANNUAL COST TO THE RESPONDENTS OR RECORD KEEPERS RESULTING FROM THE COLLECTION OF INFORMATION.

There are no record keeping or reporting costs to respondents.

## A.14. PROVIDE ESTIMATES OF THE ANNUALIZED COST TO THE FEDERAL GOVERNMENT

This is one-time data collection and there will be no recurrence. The total cost to the Federal Government for this study is $306,250 over 30 months, which amounts to an annual cost of approximately $122,500 per year for 2.5 years. This cost includes a literature review, case study design, case study questionnaire design, data collection (i.e., conducting the case study interviews), data analysis, report writing, and other project planning and administrative costs.

## A.15. EXPLAIN THE REASONS FOR ANY PROGRAM CHANGES OR ADJUSTMENTS IN ITEMS 13 OR 14 OF THE OMB 83-I

This is a new information collection resulting in a program change of adding an additional 50 hours to NHTSA's overall burden hour total. In this study, NHTSA will gather information on and provide insight into law enforcement agencies' (LEAs) implementation and use of automated license plate readers (ALPR) for traffic safety purposes.

## A.16. FOR COLLECTION OF INFORMATION WHOSE RESULTS WILL BE PUBLISHED, OUTLINE PLANS FOR TABULATION AND PUBLICATION.

A technical report will be published at the end of the study. Reported information will be aggregated to a level at which no individual or LEA can be identified. Analyses will be qualitative. No tabulations will be output.

The technical report, printed by NHTSA, will be disseminated to State, local, and national traffic safety officials. Results will also be disseminated as briefings and presentations to DOT and GHSA staff and may be presented at traffic safety meetings and research conferences.

## A.17. IF SEEKING APPROVAL TO NOT DISPLAY THE EXPIRATION DATE FOR OMB APPROVAL OF THE INFORMATION COLLECTION, EXPLAIN THE REASONS THAT DISPLAY WOULD BE INAPPROPRIATE.

NHTSA will display the expiration date for OMB approval.

## A.18. EXPLAIN EACH EXCEPTION TO THE CERTIFICATION STATEMENT IDENTIFIED IN ITEM 19, "CERTIFICATION FOR PAPERWORK REDUCTION ACT SUBMISSIONS" OF THE OMB FORM 83-I

[1] Bureau of Labor Statistics (2015). Occupational Outlook Handbook: Police and Detectives. http://www.bls.gov/ooh/protective-service/police-and-detectives.htm

No exceptions to the certification statement are made.

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