License Plate Standard
The adoption of the administrative, design, and manufacturing recommendations contained in this standard is intended to streamline the license plate retrieval processes within motor vehicle agencies, support highway safety, help prevent and solve crimes, and assist in revenue collection. It will be updated as needed to keep pace with emerging technologies and solutions.
INTRODUCTION

License plates serve one common purpose: identifying motor vehicles. They are most effective when designed to optimize legibility to the human eye, as well as for automated license plate readers (ALPRs). AAMVA’s License Plate Standard supports a jurisdiction’s ability to produce license plates that enhance accurate plate identification, while allowing for multiple plate designs and not limiting a jurisdiction’s flexibility for innovation.

This standard was developed for full-size license plates. Portions of it may not apply to smaller plates typically issued to motorcycles and other similar vehicles.
The standard addresses multiple license plate design attributes and is broken into three main sections: Administrative, Design, and Manufacture. Additional standards can be found in Appendix B.

**ADMINISTRATIVE**

This section addresses administrative and policy aspects of license plates, as well as elements of manufacture and design.

- **Display** – Characters must be displayed horizontally on the space designated by the vehicle manufacturer.

- **Unique License Plate Numbers** – There should be no duplication within a jurisdiction.

- **Items Applied to License Plates** – The life expectancy of decals is to be considered and replacement required when they become faded, damaged, or degraded. There must be a law or administrative rule prohibiting application of decals, objects, or other materials not issued by the jurisdiction.

- **Replacement Cycle** – A cycle and replacement process are to be adopted.

A Summary Checklist that helps jurisdictions check on how they utilize the specifications mentioned in the standards document can be found on page 2 of the License Plate Standard.
DESIGN

This section provides specifications intended to optimize readability by the human eye and by ALPR, as well as to ensure connection to the correct vehicle record. They allow flexibility for innovation and multiple plate designs.

- **Auditing and Accountability** – Materials used in production of license plates are carefully controlled, properly stored, and produced in a secure environment.

- **Issuing Jurisdiction** – The full issuing jurisdiction name is readable, appearing in the top center of the license plate. Character size should be 0.75-1.0 inches in height, 0.125 inch spacing, at least 0.25 inches from the top edge.

- **Character Sizing and Placement** – Characters should be at least 2.5 inches in height, proportionally wide, no less than 0.25 inches apart. Character stroke weight is 0.2-0.4 inches. Characters must be positioned no less than 1.25 inches from the top and bottom edges.

- **Fonts** – Use standardized fonts and font sizes that clearly distinguish characters.
DESIGN cont’d

- **Stacked Characters** – If used, they are part of the official plate number, with the top character entered first, followed by the bottom character, in sequence. They are not staggered or slanted and 45% of regular plate character size with 10% vertical spacing between each character.

- **Plate Type Indicator** – Plate type identifiers such as COMMERCIAL, APPORTIONED, TRAILER, DEALER, and so on are placed on the bottom of the plate between the bolt holes.

- **Messages** – Names, phrases, mottos, slogans, or other approved messages are placed at the bottom of the plate and at least 0.25 inches below the plate numbers.

- **Special Characters** – Non-alphanumeric characters found on a standard keyboard (e.g., &, #) are considered part of the plate number and should be recorded and displayed properly. If symbols are not found on a standard keyboard, they are not considered part of the license plate number and should not be treated as such.

License plate design affects the ability of key parties to identify plates accurately, which can impact certain revenue sources, including toll collection, restricted lane access, and parking regulations.
**DESIGN cont’d**

- **Spaces and Dashes** – Spaces or dashes are not assigned value. Dashes are treated the same as spaces.

- **Graphics** – Graphics must not distort or interfere with readability or any identifying information. If text is included within the graphic, a translucent ink or other technique is used so it is not read by ALPR.

- **Graphic Placement** – When used, graphics will either be on the right or left side of the plate number. They are restricted to an area that doesn’t interfere with size requirements. Graphics can stretch from plate edge to within 0.25 inches of the nearest character and within 0.25 inches of the top and bottom.

- **Background and Wallpaper** – When used, a background or wallpaper does not interfere with readability by the human eye or ALPR.

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The AAMVA Best Practices and Model Legislation website page contains the complete Best Practices for Improving Automated License Plate Reader Effectiveness through Uniform License Plate Design and Manufacture Best Practice Guide. Section 6 and Appendix B of the document contain additional related recommendations.
MANUFACTURE

This section provides key specifications in the manufacturing process necessary to produce license plates in a consistent manner that also optimizes readability, security, appearance, and performance, including flat and embossed plates.

- **License Plate Dimensions and Bolt Holes** – Dimensions and bolt holes for passenger vehicles, trucks, and trailers must comply with the Society of Automotive Engineers (SAE)-Motor Vehicle License Plates Standard J686 (revised July 2012).

- **Printing Process** – The process must allow for high-contrast recognition for infrared and visible light illumination in daylight and nighttime conditions.

- **Retro-reflectivity** – License plates must contain a retro-reflective surface and numbers that are readable in daylight and nighttime from at least 75 feet away and are not distorted by headlights.

*License plates must contain a retro-reflective surface consistent with International Organization for Standardization ISO 7591, clause 3.*
Security Features – Specific security features are chosen at the discretion of the issuing jurisdiction. They should be difficult to duplicate, an integral part of the license plate and a feature that does not interfere with the license plate character legibility by the human eye and ALPR. They must have at least one level 1 security feature. Level 1 refers to first-line inspection, or examination without tools or aids that involves easily identifiable visual or tactile features for rapid inspection at the point of usage.
CONCLUSION

The ability for motor vehicle agency employees, police officers, and citizens to quickly and easily identify license plate numbers is fundamental to accurate vehicle registration data creation, maintenance, and retrieval. The adoption of the administrative, design, and manufacturing recommendations contained in AAMVA’s *License Plate Standard* will streamline these processes.
About AAMVA’s License Plate Standard Working Group

The License Plate Standard Working Group includes representatives from member jurisdiction motor vehicle and state police agencies, revenue collection agencies, and departments of transportation from across North America.
safe drivers
safe vehicles
secure identities
saving lives!