

State of Alabama

License Plate Design Specifications

The State of Alabama began manufacturing license plates using digital license plate technology in September 2006. This technology permits plates to be manufactured in a more efficient manner and both the legibility and visibility of the alphanumeric characters are enhanced. These design specifications have been prepared to assist organizations so that Alabama license plates are manufactured in a uniform manner. Many of the specifications contained in this document are provided by law or have been adopted from the American Association of Motor Vehicle Administrators (AAMVA) License Plate Legibility Testing Guidelines for Reflective Sheeting.

Please review the specifications below carefully before beginning the design process.

AUTHORITY:

The Revenue Department is authorized under Section 32-6-57, Code of Alabama 1975, to promulgate rules and regulations and to adopt plans for such tags or plates, and all decals, slogans, stickers, symbols, characters, and other attachments.

As provided under Section 32-6-64, Code of Alabama 1975, the design of license plates, including all emblems, slogans, symbols, or characters appearing on the plates, shall be by rule as promulgated by the Commissioner of Revenue, and as otherwise specified by law.

In accordance with Section 32-6-150, Code of Alabama 1975, the special marks or badges of distinction shall include distinctive tags, assigned by the Department of Revenue for each of those public two-year and four-year colleges and universities and private four-year colleges or universities and Athens State University participating in the distinctive tag program and the Environmental Distinctive Tag Program. The board of trustees of the respective four-year colleges and universities shall design, or have designed, the distinctive tag for a four-year college or university subject to approval by the Commissioner of Revenue and in compliance with all pertinent laws and regulations. The president of each two-year college shall be responsible for having the distinctive tag for his or her two-year college designed subject to approval by the Legislative Oversight Committee created pursuant to Section 32-6-67 and to approval by the Commissioner of Revenue and in compliance with all laws and regulations.

In accordance with Sections 32-6-57 and 32-6-64, Code of Alabama 1975, the Department of Corrections will supply all license plates and revalidation devices. Alabama Correctional Industries (ACI), a division of the Department of Corrections, is responsible for the manufacture of all Alabama license plates.

REFLECTIVITY:

In accordance with Section 32-6-57, Code of Alabama 1975, every license tag or plate shall be manufactured in such a manner as to meet the minimum federal performance standards as set out in Table I of the Society of Automotive Engineers Standard J594e, "Reflex Reflectors," of Federal Standard 108. In accordance with Section 32-6-64, Code of Alabama 1975, the face of the license plate to be displayed shall be fully treated with a reflective material which will increase the nighttime/low light visibility and legibility of the plate. The Alabama Law Enforcement Agency (ALEA) will conduct reflectivity and visibility testing on all license plates. Testing should be performed manually and with an automated license plate reader under daytime and nighttime/low light conditions. The results of the testing shall be provided on the

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License Plate Legibility Test Form (MV 32-6-57). If the license plates do not meet the reflectivity and visibility requirements, the license plate design must be amended. It is recommended that a 75-foot sight check be conducted on the license plate sample(s) during daytime and nighttime/low light conditions to determine if the sample license plate is readable.

REDESIGN:

In accordance with Section 32-6-62, Code of Alabama 1975, all motor vehicle license plate designs shall be valid for not less than five years. The Commissioner of Revenue, with the approval of the License Plates Legislative Oversight Committee established by Section 32-6-67, may authorize a license plate design to be valid for more than five years.

PRINTABLE AREA:

License plates are manufactured in two sizes. Passenger vehicle license plates are standard 6" X 12". Motorcycle license plates are 4" X 7". For Quantity Class 2, graphics are limited to an area 5.44 X 11.44" for a passenger license plate. Leave .28" perimeter around the tag free of graphics. In accordance with Section 32-6-59.1, Code of Alabama 1975, the design for the distinctive motorcycle plates shall be the same design as plates for private passenger automobiles, pickup trucks, and pleasure motor vehicles in each distinctive license plate category. The design for motorcycle plates will be reduced to fit the 4" X 7" plate size. See LOGOS subsection below for Quantity Class 1 (generic) license plate design specifications.

COLORS:

White is the optimum background color for all license plates and is required for quantity class 1 (generic) license plate designs.

Designs are limited to four (4) process colors. A process color is a mixture of CYAN, MAGENTA, YELLOW, and BLACK to make one color, but it is done in four passes of a press. **DO NOT submit license plate designs with spot colors.** A spot color, such as a PMS color, is mixed in a can and only takes one pass of a press.

Solid colors will result in a better-finished product than screened colors that are made up of dots. Please be sure to include a list of your process colors for each element contained in the design with the corresponding color codes, e.g. Cyan: XX.

COLOR TRAPPING:

Think Thick!!! Trap lines are like the thick black lines in children's coloring books that hold a color within a boundary, or where two different colors meet and overlap. Your trap lines need to be at least two (2) points thick (the thicker the better). Any line width in your artwork must be at least .5 points, or it may not print.

LICENSE PLATE NUMBERS:

In accordance with Section 32-6-64, Code of Alabama 1975, all alphanumeric characters on the license plates shall be no smaller than two and three-fourths inches in height. The

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“2.875” X 8.75” area for the license plate numbers should be free of graphics. A maximum of seven (7) alphanumeric characters may be displayed on standard license plates. A maximum of six (6) alphanumeric spaces may be displayed on quantity class 2 distinctive license plates. A maximum of five (5) alphanumeric characters may be displayed on quantity class 1 (generic) distinctive license plates. If the international symbol of disability access may be displayed on the license plate, the symbol will require at least one-character space. Spacing between characters should be at least equal to the stroke width. All license plate numbers will be printed in black to ensure a minimum contrast ratio of 4-to-1 between different background colors and the alphanumeric characters to ensure that the background is four (4) times brighter than the alphanumeric characters.

“ALABAMA” FORMAT AND FONT:

“ALABAMA” must be capitalized and placed between the bolt holes at the top of the license plate in the font URW BaskerTwid (similar to Times New Roman), 80 points. The character color should provide a good color contrast with the license plate background color.

ORGANIZATION OR CATEGORY NAME:

The typical size of the font for the name of sponsoring organization, college or university, military campaign, etc. is ¾” to 1”. If not included in the design, this text should appear at the bottom of the license plate design between the bolt holes if Quantity Class 2 is selected; otherwise, it must appear in the logo portion of the license plate if Quantity Class 1 is selected.

LOGOS:

The license plate message or image must be in good taste and related to the sponsoring organization. If the logo or design includes copyright protected elements, written permission to have the design appear on an Alabama license plate must be provided to the Department.

For generic license plate designs in Quantity Class 1, the logo or design shall be located on the left side of the license plate. The maximum size of the logo for the passenger plate is 3.5” X 2.5” (motorcycle plate logo adjusted accordingly) and will allow space for five (5) alphanumeric characters. License plate designs in Quantity Class 2 must have the logo or design placed on the left side of the alphanumeric portion of the license plate which allows for six (6) alphanumeric characters. **Please be mindful of the bolt holes in the metal license plate.** Bolt holes are .3125 inches in diameter.

VALIDATION DECAL:

Validation decal space is at the top right-hand corner of the plate. The size of the decal is approximately 2.5” x 2.5”. As provided under Section 32-6-63, Code of Alabama 1975, for the years during which the metal license plates are not issued, in lieu thereof, validation decals or other devices suitable for attaching to a motor vehicle license plate shall be issued. The validation decal or device shall indicate the period for which it was issued and shall, when properly affixed to the license plate, evidence payment for the motor vehicle license fees and taxes for the period indicated thereon. Such validation decal or device shall be such size as the legislative oversight committee, as provided for in this section, deems appropriate and shall

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bear a bright reflective background contrasting with the digits or letters printed thereon. The month and year of expiration shall be printed on the validation decal.

“HEART OF DIXIE” LANGUAGE:

In accordance with Section 32-6-54, Code of Alabama 1975, every license tag or license plate issued by the State of Alabama for use on motor vehicles, in addition to any letters and figures prescribed by the Commissioner of Revenue, shall also have imprinted thereon a conventionalized representation of a heart and the words "Heart of Dixie". Any organization that sponsors a distinctive license plate may request that the "Heart of Dixie" language not be reflected on the license plate. For Quantity Class 1 (generic) license plates, the heart will appear in the lower right-hand corner of the license plate. For Quantity Class 2 license plates, the heart may appear anywhere if it does not interfere with the required elements of the license plate design.

DIGITAL LICENSE PLATE DESIGN GUIDE

The following information is provided for digital graphic license plate artwork, design and production.

PRINTING CAPABILITIES

To better understand the design process, the digital license plate printing process will be explained. The digital license plate printing process is unique and as such, requires different design specifications than those used in conventional printing.

Medium

All digital license plates are printed on 3M reflective sheeting. The sheeting is not as dimensionally stable as paper; therefore, stretching may occur. This medium also has some limits in thermal transfer graphic printing due to the high heat required to transfer the ribbon media to the sheeting.

Registration

Registration of each of the 4 color stations is plus or minus 4.5 mils (.0045) per color. The sheeting has a tick mark used for printer registration. The printer uses a Top Of Form (TOF) sensor to read the tick mark and locate the graphic. The registration of the printer to the tick mark is plus or minus 5 mils (.005)

Coverage

The coarseness of the sheeting may cause halftones over 75% tint value, to fill in. Halftones under 5% tint value may not print at all. Most images are printed at 45-55 lpi for optimum coverage and printability, but some images can be printed up to 75 lpi. Graduated halftones are especially better at the lower 45-55 lpi. The designer, in certain instances, may need to adjust the separation angles, the separation technique and/or dot shape to optimize printing of the design. Thin lines less than 1/32 of an inch may break up or print unevenly.

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Colorants

The colorants used for 3M digital license plate printing are resin ribbons manufactured to be UV fade resistant. These ribbons produce colors that are transparent, to meet reflectivity standards. The digital license plate printing process does not use the PANTONE® Color Match System.

DESIGN

Please keep the following parameters in mind before starting any digital license plate design:

Size

The finished plate size for digital license plates is 6 X 12 inches. Designs for use in the United States must fit into a 5.44 X 11.44” rectangle, with radius corners sized to match the debossing rim in the blanking press. The resulting .28” margin is needed to ensure acceptable finished license plates, given the requirements of the sheeting and the production process. Bolt holes are .3125 inches in diameter.

Line Art

Avoid thin lines under 1/32 of an inch in width. Intricate solid shapes are acceptable; however, a loss of detail may occur. Design elements (shapes) smaller than .008 x .008 inches and/or .008 inches in any dimension, may fail to print.

Color

Typical 4-color designs should be designed and setup using the CMYK colors only. While halftones and graduated tones may be used, a shift in these tones may result, due to the unique properties of the reflective materials, ribbons and printing processes. At a 300 x 300 dpi resolution and a 53 lpi line screen, the printer is capable of printing a maximum of 32,768 colors. The actual color palette size is somewhat smaller due to limitations of the thermal transfer process and the reflective sheeting.

Due to the excessive heat that could be generated by producing plate designs with large color fill areas, the graphic design should be limited in the amount of color saturation. For best results, the following guidelines and test are suggested:

1 Pixel Test - The total tonal value of all colors should not exceed 50%. This can be found through Adobe Photoshop. After bringing the design into Photoshop, select the bilinear image resample and then reduce the size of the image to 1 pixel. Use the magnify tool to enlarge the pixel. Make sure the image is in CMYK mode. Place the Magic Wand tool over the pixel and add up the % values in the Info box. If any one color is over 25% or if the total coverage is over 50%, the length of a print run could be limited, and the life of the print heads could be shortened below warranty levels.

The designer should seek to balance the use of color in the design across the license plate. Designs with color on one side of the plate but not on the other side, or uneven color distribution across the plate, could cause ribbon wrinkling during printing.

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Graphic Placement and Legibility

Avoid heavy coverage of colorant in the alphanumeric areas. Heavy coverage in these areas reduces legibility for law enforcement. Design elements (text and logos) dark in color should be spaced at least 1/4 of an inch away from the alphanumeric characters.

Trapping

Because of the transparent properties of the thermal transfer ribbons, trapping between colors and halftones is not recommended.

COMPUTER CAPABILITIES

Compatibility

ACI accepts files created and saved in Adobe Illustrator. All placed or parsed bitmap files must be included separately. Save in the Illustrator .ai format. Save files with elements on separate layers and do not flatten before saving. All files must have antialiasing and color profiles turned off. **Do not use compression software of any kind for vector files.** ACI does not use 3D or CAD software. Specify all fonts used, color call outs, and halftone tint values if halftones are used in the license plate design.

ELECTRONIC DESIGN

All license plate designs are completed in vector form (Adobe Illustrator).

Vector Artwork

Fonts, logos, halftone areas, gradient fill areas, and line art in general, should be constructed in Adobe Illustrator. This makes file sizes small and editing, trapping, and color separation easier. For example, crisp type produced in a paint program would need to be at 300 dpi resulting in huge file sizes. Convert all fonts to vector form by using Create Outlines.