

# NEW GUIDELINES FOR DESIGNING ALABAMA LICENSE PLATES

September 2013

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 for law enforcement purposes. Due to the use of this new technology, these design specifications have been prepared to assist colleges, universities, military, and sponsoring organizations with designing license plates so that the State of Alabama manufactures plates in the most efficient manner with limited production downtime.

**Please review the new guidelines carefully before beginning the design process.**

## **PRINTABLE AREA:**

The dimensions for the printable area of the license plate are 11.44" X 5.44". Please ensure that graphics are limited to this area and leave a ¼" perimeter around the tag free of graphics. This area is where the metal plates will be handled during the printing process.

## **COLORS:**

**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. **Please 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:**

Leave a **2.875" X 8.75"** area for the license plate numbers. A maximum of six (6) alphanumeric spaces is available based on the license plate design. **All license plate numbers will be printed in black.**

**The license plate number area must be free of graphics that would obscure the readability of the characters on the plate for law enforcement or license plate reader technology.**

## **FONTS AND SIZES:**

### **“ALABAMA”**

“ALABAMA” must be placed at the top of the license plate in the font URW BaskerTwid (similar to Times New Roman), 80 points.

## **COLLEGE, UNIVERSITY, ORGANIZATION, OR MILITARY CAMPAIGN NAME**

For legibility purposes, perform the 75 feet sight check on the font selected. The typical size of the font for the college/university/organization/military campaign name is  $\frac{3}{4}$ " to 1". This text may appear at the bottom of the license plate design 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:**

For 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 is 2.5" X 2.5" 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. For license plate designs in Quantity Class 2, the height of the graphics may extend into the decal areas, as long as the color does not impact decal visibility. **Please be mindful of the bolt holes in the metal license plate.**

## **VALIDATION DECAL SPACES:**

Decal spaces are at the top corners of the plate for validation decals. The size of each decal is approximately 2.5" x 2.5".

## **“HEART OF DIXIE” LANGUAGE:**

Any college, university, military, or sponsoring organization that sponsors distinctive license plate category may request that the language “Heart of Dixie” not appear in the license plate design. A conventionalized representation of a heart must appear in the design as required by state law.

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## **DIGITAL LICENSE PLATE DESIGN GUIDE**

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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.

## **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, in order 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 12 x 6 inches. Designs for use in the United States must fit into an 11.44 x 5.44 inch rectangle, with radius corners sized to match the debossing rim in the blanking press. The resulting .28 inch 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 Department of Revenue, Motor Vehicle Division, will contact you if this problem is discovered with the license plate design.

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.

## 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 alphanumerics.

## Trapping

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

## COMPUTER CAPABILITIES

Alabama Correctional Industries (ACI) uses Adobe Illustrator.

## 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 anti-aliasing 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.

## **SUBMITTING THE DESIGN**

### **Submit the license plate design to:**

Alabama Department of Revenue  
Motor Vehicle Division  
Registration Section  
P.O. Box 327630  
Montgomery, AL 36132-7630  
Phone: (334) 242-9006  
Fax: (334) 353-7846  
Email: [tags@revenue.alabama.gov](mailto:tags@revenue.alabama.gov)