3M Traffic Safety and Security Division (TSSD)
CONVENTIONAL LICENSE PLATE DESIGN GUIDE
Version 12.1.16

The following is a guide designed to provide 3M license plate customers with information relating to graphic license plate artwork, design, and production.

PRINTING CAPABILITIES

To better understand the design process, the license plate printing process will be explained.

Medium
All 3M license plates are printed on reflective sheeting. The sheeting is not as dimensionally stable as paper and therefore stretching may occur.

Registration
Because the sheeting stretches and is printed in a web offset manner, registration is plus or minus 1/32 of an inch per color.

Coverage
The coarseness of the sheeting may cause halftones over 80% tint value, to fill in. Halftones under 30% tint value may not print at all. Halftones are typically printed using 45 lpi. The angles may be adjusted by 3M in certain instances. Thin lines less than 1/32 of an inch, may break up or print unevenly.

Inks
The inks used for license plate printing are manufactured by 3M and are designed to be UV fade resistant. These inks are transparent in order to meet reflectivity standards. Please use PANTONE® numbers to specify color. Metallic and fluorescent Pantone® inks (numbers 801-877) are not available for license plate printing.

DESIGN

Keep the following parameters in mind before starting any license plate design.

Size
The design template is a standard 6" x 12". Designs should fit within a 11.5" x 5.5" rectangle. The resulting 1/4 margin is needed to ensure acceptable finished license plates, given the requirements of the sheeting and the production process.

Graphic Placement and Legibility
Avoid heavy coverage of ink in the alpha-numeric 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 alpha-numerics.

Color
The use of spot colors is preferable over process-color due to the intensity and the ability to control the inks. If spot colors are being used, only four colors may be used in any design, including black. This does not include the roll coat color for the alpha-numerics. For example, a design could be comprised of three Pantone® colors in addition to black. If process-color is being used (CMYK), the text on the plate must use one of the process colors to avoid fuzzy edges. Black is preferable for the text in this case.

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

DESIGN SUBMISSIONS

3M TSSD uses Adobe Illustrator, Adobe Photoshop, and Adobe Streamline, on Macintosh computers.

Compatibility
3M TSSD accepts all Adobe Illustrator files. All placed or parsed bitmap files must be included separately.
3M TSSD accepts all Adobe Photoshop files, as well.

Corel Draw users: Save files in the Illustrator format. Include all placed or embedded bitmaps as separate files.
3M TSSD cannot work directly with .cdr files.

Corel Paint users: Save files in the tiff format, uncompressed.

ELECTRONIC DESIGN

The following guidelines are for customers sending electronic files.

All license plate designs are completed in vector form (Adobe Illustrator) with placed photographs, if any. 3M TSSD prefers that customers send original photographs and/or traditional illustrations for scanning and converting to spot color. 3M TSSD will accept Adobe Photoshop files or tiff files of scanned or created material. However, the resolution cannot be increased.

Vector Artwork
Fonts, logos, halftone areas, gradient fill areas, and line art, should be constructed in a vector drawing program, such as Adobe Illustrator. This makes file sizes smaller and editing, trapping, and color separation easier.

Fill and/or stroke vector paths, using the PANTONE® colors. If using Adobe Illustrator, use default black instead of C:0%, M:0%, Y:0%, and K:100%. Use default white instead of C:0%, M:0%, Y:0%, and K:0%.

Convert all fonts to vector form by using Create Outlines in Adobe Illustrator or convert text to paths according to the vector program that is being used.

3M TSSD will scan and convert any line art on paper or film.

Customers sending in pictures for scanning, should keep in mind that photographs and/or illustrations from previously printed materials such as books, magazines, and brochures will not scan well due to halftone dot patterns. Scanning such material may constitute a copyright violation, for which the customer, not 3M TSSD will be held liable. Do not send website images or printouts thereof. Website images conform to IBM PC standards. That is the lowest possible image quality (8-bit color at 72dpi). These images are not usable.

Please include a hardcopy or detailed layout for each design. This can be color, black and white laser prints, or drawn layouts. Include color call outs, identify the fonts used, and specify halftone values. This avoids any confusion concerning the design and its elements.

ELECTRONIC DISK FORMATS

Designs may be submitted on CD
Files may be e-mailed, but problems may arise due to file size and format. If too large, a Web Dropbox will be set-up for the designer to transfer artwork to 3M.