Introduction

Gravity Graphics is often requested to produce a company logo on a large format scale. Due to the production methods and fabrication processes we require specific types of files to ensure the best possible outcome. It is important to understand the differences between the 2 most common file formats -- Vector & Bitmap. While certain formats may work great for applications such as websites or letterheads, this may not be the case for large format outputs. The idea is to provide you with the best quality product.

To make this easier to understand, we have put together some examples that show the differences between Vector Artwork and Bitmap (or Raster) Artwork. You will learn when a vector graphic is required as well as how to prepare and send files. This will help you understand why vector graphics are preferred and most often required over bitmaps depending on intended usage and production method. In most cases, we require vector graphics for optimum quality.

Acceptable Graphic Types and Formats

Understanding the difference between bitmap and vector graphics is key to selecting the appropriate file for the required production method.

- Vector artwork is required for logos, clip-art, or anything non-photographic to retain the highest quality
- Vector artwork is required if the image will be cut (i.e. vinyl, acrylic, dimensional signs)
- File formats accepted for vector artwork: AI, EPS, PDF, SVG

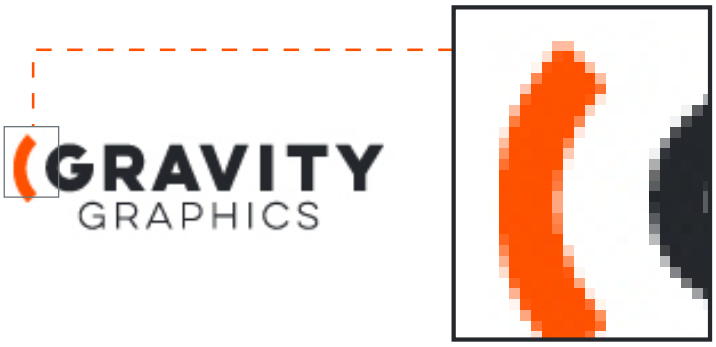
Files should meet these guidelines:

- Have desired colors clearly indicated
- Graphic is clean and doesn't have any unnecessary jagged lines or extra nodes
- Intricate graphics can be modified/simplified to meet production capabilities

If you are unable to provide a workable file, we can provide you with a quote to recreate your artwork.

Vector vs. Bitmap Graphics

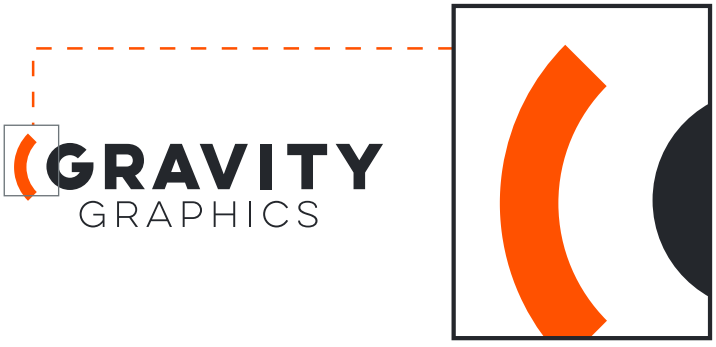
Example of Bitmap



The example shown cannot be used to cut shapes out of material, i.e., vinyl, acrylic, etc. Quality will be lost when printed at a larger scale.

- Paint and image-editing software such as Adobe Photoshop, generate bitmap images or raster images.
- Bitmap images use a grid (also known as a bitmap or raster) of small squares, known as pixels, to represent graphics.
- Bitmap images are resolution dependent, representing a fixed number of pixels. Images can appear jagged and lose detail if scaled or printed at a resolution higher than its original settings.

Example of Vector



The example shown demonstrates that vector artwork quality is not compromised when scaled and can be used to cut shapes out of material, i.e. vinyl, acrylic, etc.

- Drawing programs such as Adobe Illustrator create vector graphics.
- Vector graphics consists of paths, which are defined by a start and end point. A path can be anything from a line to a curvy shape. Paths are also used to define the characters of typefaces.
- Resolution-independent which means it can be scaled to any size and printed on any output device at any resolution without losing its detail or clarity.