

## Overview of Process:

- Step 1: File Preparation in Adobe Illustrator**
- Step 2: Set Media Height of Material on MO-240**  
**Set Media Height of Material on CO/CO-i Printers**
- Step 3: Loading the Braille Signage File**
- Step 4: Braille Signage Print Settings**  
**Printer settings: MO-240**  
**Printer settings: CO/CO-i Printers**
- Step 5: Print Sample Files – VersaWorks / MO-240**  
**Print Sample Files – VersaWorks / CO/CO-i Printers**



## Braille Regulations

The included Print Instructions will allow the production of domed, Braille Signage.

- Height: .025" - .038"**
- Base Diameter: .059" - .063"**
- Space between Braille dot: .09" - .10"**
- Space between Cell: .241" - .30"**
- Space between Line: .395" - .40"**

### Braille Dot Sizing and Spacing:

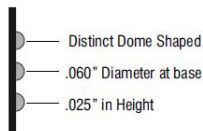
These are the standard dimensions for Braille from ANSI A117.1 and 2010 Standards. All measurements are in inches.

Measurement	
Dot Height	0.025 to 0.037
Dot Diameter	0.059 to 0.063
Spacing between dots	0.090 to 0.100
Vertical Cell Spacing	0.395 to 0.400
Horizontal Cell Spacing	0.241 to 0.300
Dot Shape	Domed or rounded

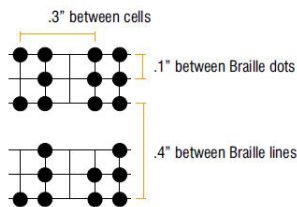
### IMPORTANT:

Check your state laws regarding Braille. Some states, such as California, have their own requirements, which are more strict than these standards.

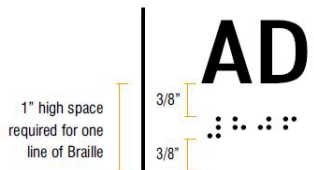
### Braille Size



### Braille Spacing

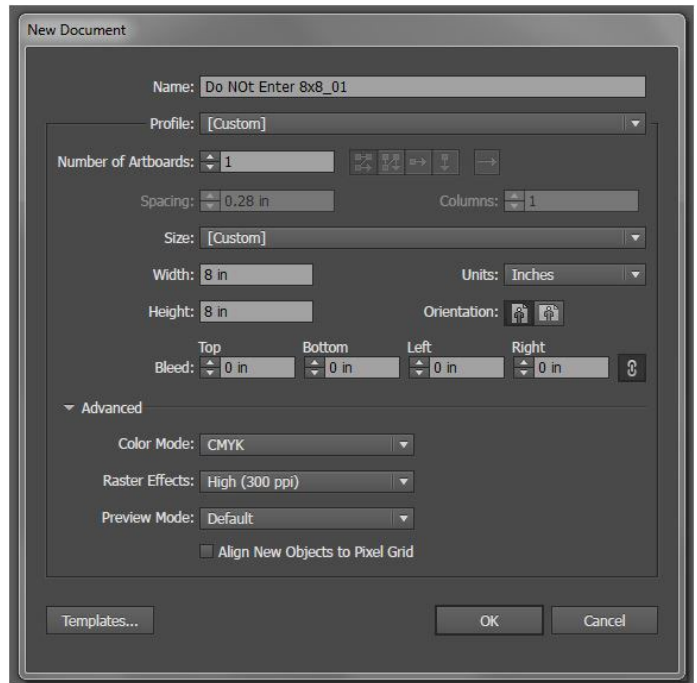


### Spacing on Sign

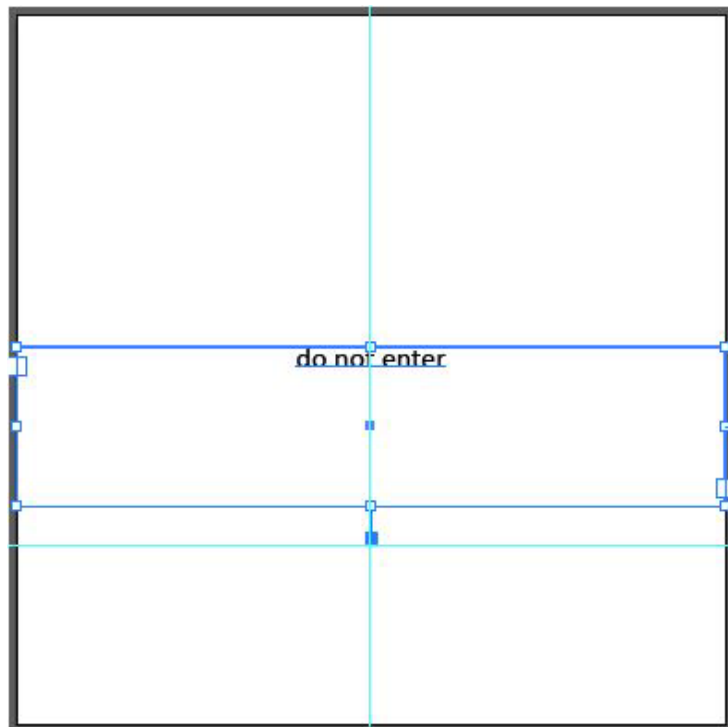


## Step 1: File Preparation in Adobe Illustrator

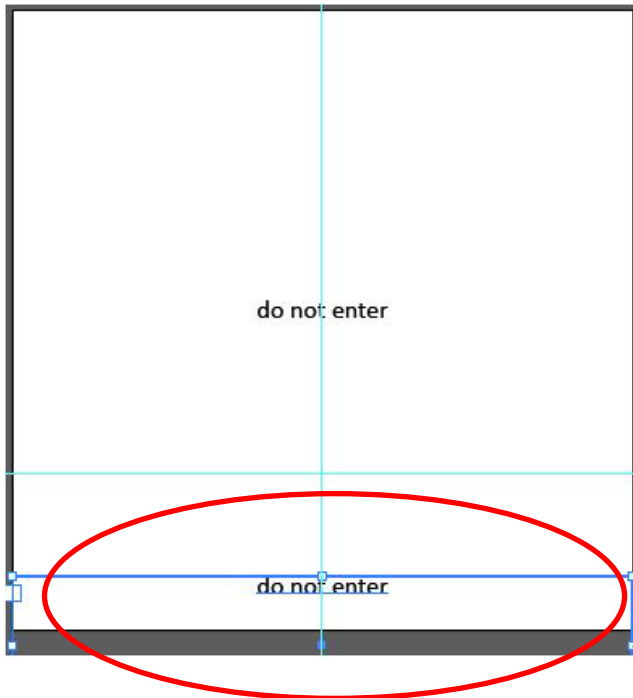
1. Create a new document (ex. 8" x 8"):
  - File > New



2. Create a text box and enter the text body - Example: **do not enter**.



3. Copy (duplicate) and paste the box of text below the original text.



**Note:**  
Braille must be in lowercase, except for proper names, acronyms and letters as part of a number.

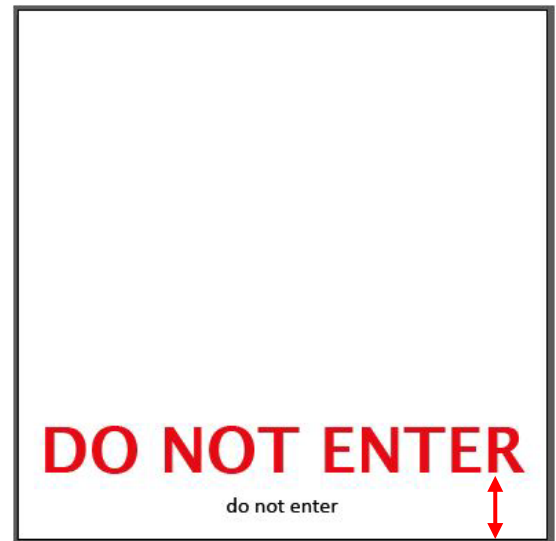
4. Set the 1st line of text with the desired font no less than one inch above the bottom of the graphic boundary.

**Example:**

Lucida Sans 67pt  
(DO NOT ENTER)

Below is a list of Braille Signage compliant Fonts

- ARIAL MEDIUM
- FRUTIGER 55
- FUTURA MEDIUM
- HELVETICA
- LUCIDA SANS
- TREBUCHET

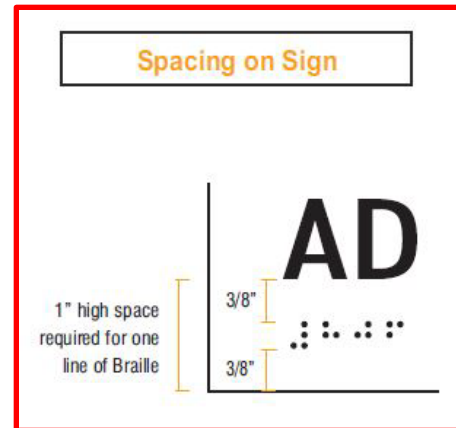


Spaces must be 1" above bottom of graphic

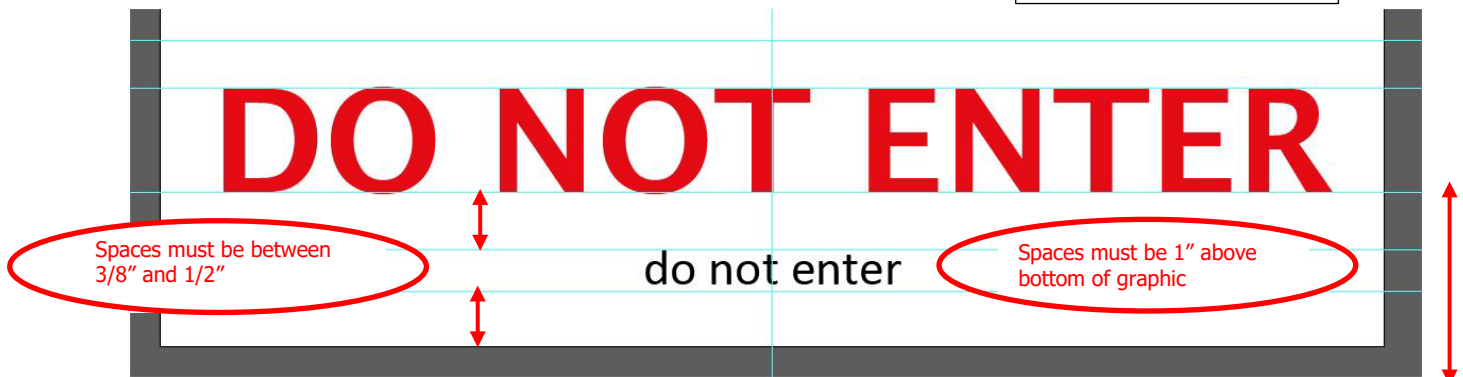
Regulations - Design Guidelines  
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- Place a 2nd line of text 3/8 in inch to 1/2 inch below the original text box.

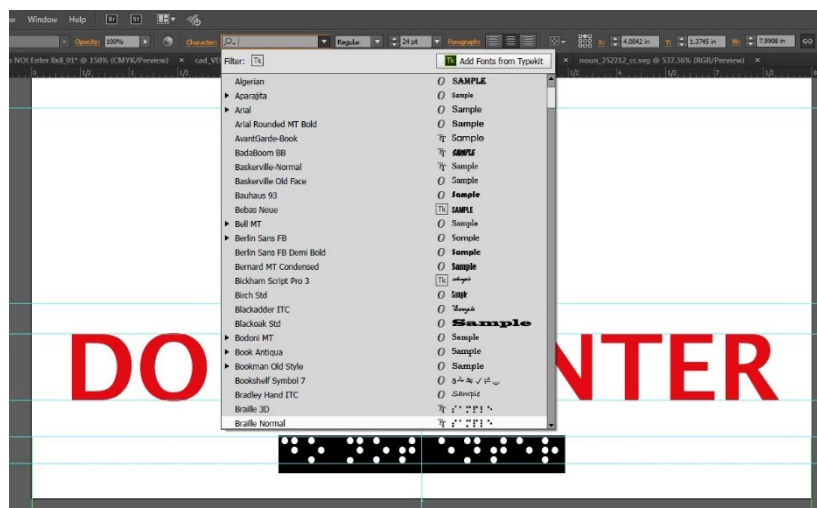
**Note:** The Braille text must have a space above and below the to conform to graphic to conform to Braille Signage Regulations. The Tactile Text (DO NOT ENTER) must be placed no less than 1 inch above the bottom of the document.



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- Highlight the (lower) 2nd line of text and change the font to Braille Normal.

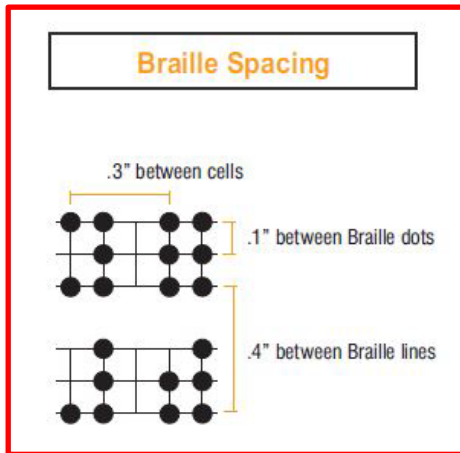


- After changing the font type, Set the Font Size to 24pt.

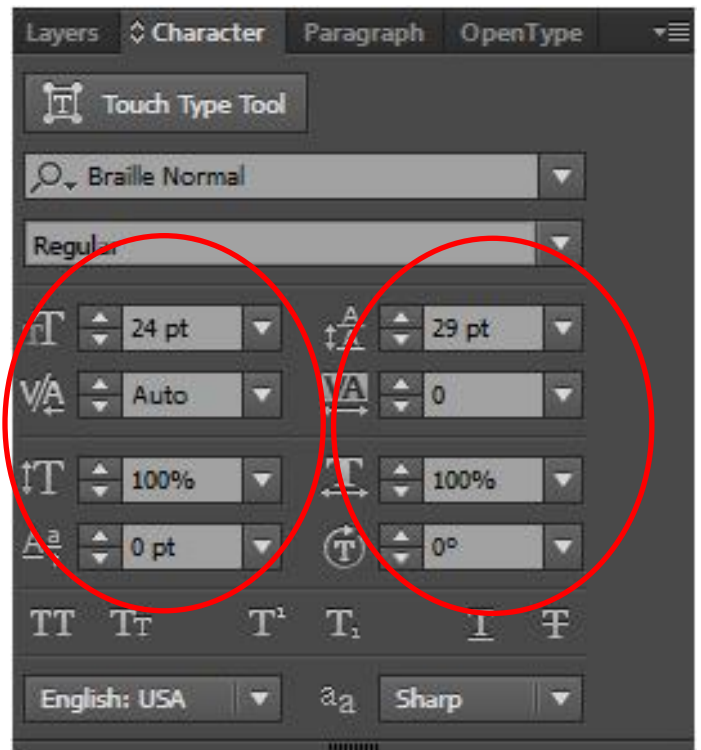
**Note:** Braille must be in lowercase, except for proper names, acronyms and letters as part of a number.

- After changing the Font Size to 24pt, change the **Font** spacing to 29pt.

**Note:** Using 24pt size for the Braille Normal will keep the Braille dot size and the spacing between the dots correct.



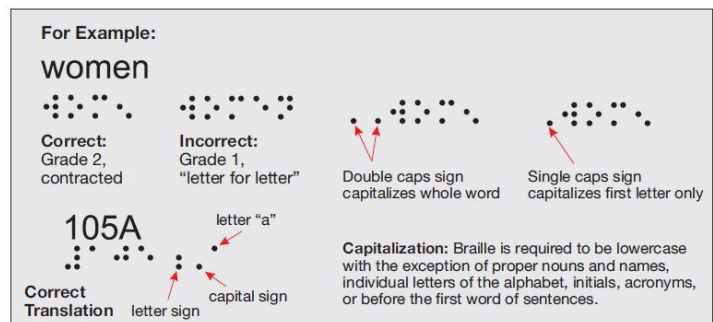
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**Note:** Text on tactile signs must include Grade 2 Braille. Grade 2 is not a “letter for letter” translation of the text; it contains 265 contractions, single characters used to represent whole words or groups of letters. A good font-translation software is a must and should be used for best accuracy.

All Braille should be lowercase, except proper names (example: “Fred Jones”); as well as any letters which are part of a room number (“105A”), initials, acronyms or before the first word of sentences.

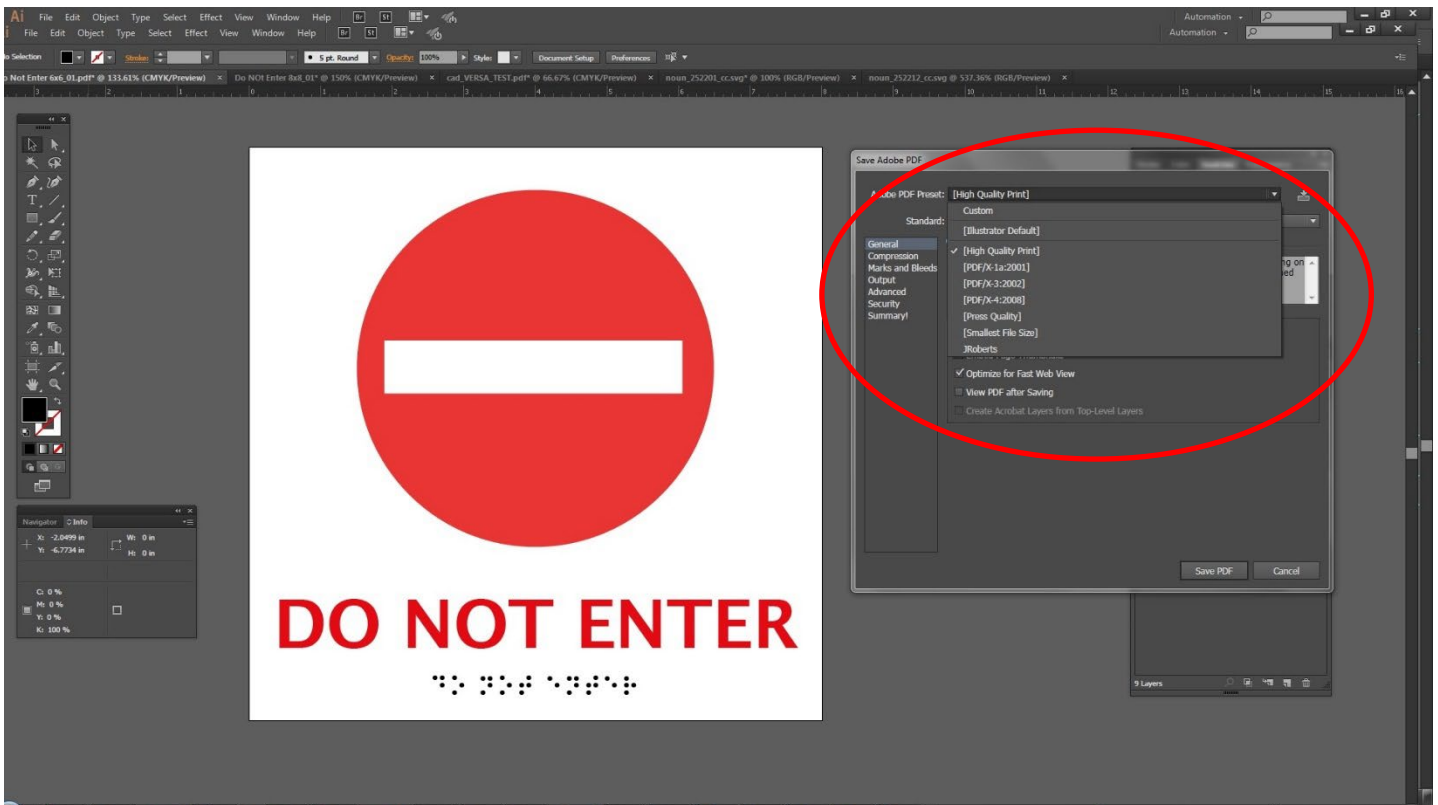
Most Braille translation software is case-sensitive, meaning if you type text in lowercase, the Braille output will be lowercase, and if you type in uppercase, the Braille output will be in uppercase.



- 9. Add desired graphic above test boxes. Graphics can occupy only the top 6" of the graphic, but does not have to fill the entire area.



- 10. Save File as High Quality PDF.



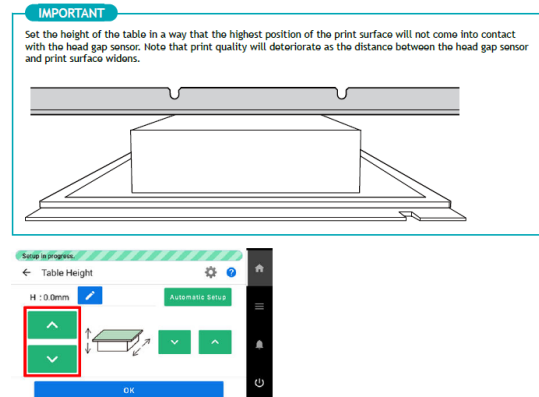
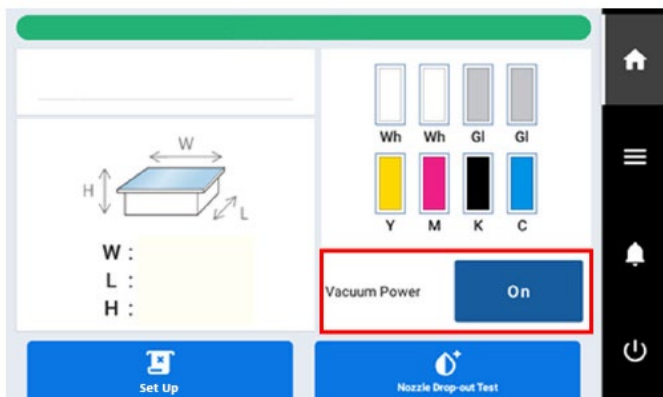
## Step 2a: Setting the Height of the Media Manually on the VersaObject MO-240

### SETUP MEDIA

1. Secure the media in place on the flat table.
2. Press [PAUSE/VACUUM].
3. Close the front cover.
4. Press [SETUP].
5. [SETUP] starts to flash.
6. Press [UP Arrow], or [DOWN Arrow] to move the flat table up or down.
7. Move the head gap sensor as close as possible to the print surface without touching the material.  
**\*This step can be performed with the front cover open.**

### NOTE:

Set the height of the table in a way that the highest position of the media (print surface) will not come into contact with the head gap sensor.



### IMPORTANT:

8. **Add 0.040"** to the height ABOVE the set height.  
 In-order to account for the Layering of Braille or tactile graphics, the height above the current un-printed material must have gap otherwise during the process the printer will Cancel Due to Bed Height.
9. When the location is set and the additional 0.040" is set, **press [ENTER]**.

## Step 2b: Setting the Height of the Media Manually on the CO/CO-I Printers

### SETUP MEDIA

1. Secure the media in place on the flatbed table.
2. Press [**PUMP 1**] to activate the table vacuum on the flatbed console.
3. Press [**AUTO Z**] to Set Up media height
4. Automatic Media Height Detection will enable.



5. Manually [UP] raise the Head Height to .040" (1mm) above the current height.



### NOTE:

Set the height of the table in a way that the highest position of the media (print surface) will not come into contact with the head gap sensor.

### IMPORTANT:

6. **Add 0.040"** to the height ABOVE the set height.  
In-order to account for the Layering of Braille or tactile graphics, the height above the current un-printed material must have gap otherwise during the process the printer will Cancel Due to Bed Height.



### Step 3: Load the Braille Signage Sample Files (4 times)

In VersaWorks: load the sample file 4 times

1. File -> Open: (Do Not Enter 8x8\_01.pdf)
2. File -> Open: (Do Not Enter 8x8\_01.pdf)
3. File -> Open: (Do Not Enter 8x8\_01.pdf)
4. File -> Open: (Do Not Enter 8x8\_01.pdf)



MO-240 DE...  
Setup Incomplete

Media Status  
Ink Status

Print Status		
Status	Job Name	Nickname

RIP Status		
Status	Job Name	Nickname

Job List MO-240 DEMO

Queue	Status	Job Name	Input Time
Queue A			
Queue B			
		Do Not Enter 8x8_01.pdf	06/27 13:21
		Do Not Enter 8x8_01.pdf	06/27 13:22
		Do Not Enter 8x8_01.pdf	06/27 13:22

**File Attributes**

File Name: Do Not Enter 5.5 x 6 01.pdf  
 Creation Date: 27/ 6/2024 13:21:53  
 Size: 158 KB

**Document Information**

File Type: PDF File  
 # of Pages: 1  
 Page Size: 5.5 x 6.0 in  
 Special Items: Wh GI

**Job Properties**

Media Name: Generic  
 Print Quality: Standard  
 Color Settings: MOEcoUV5\_CMYKRe\_Generic\_v720x900.icc  
 Color Adjustment: Linear (Not Edited)  
 Printer Color Match: Disable  
 Scale: 100%  
 # of Copies: 1  
 # of Tiles: 1  
 Mark/Label: Disable  
 Print Area: 5.5 x 18.0 in  
 Action After Print: Save Job  
 Ink Consumption(Esti...: 0.09



## Step 4a: Print Settings – MO-240

**Braille Signage Printing Pass 1- MO-240 to achieve .025" - 038" braille dome height**

### 4 prints are to be printed

1. **Primer or Matte Varnish** (depending on ink configuration) This will allow good adhesion to media.
2. \***Embossing – 10 overprints**
3. \***Embossing – 10 overprints**
4. **CMYK** This will create the color needed and finish the height for Braille printing to the media.

\*In order to sufficiently build the tactile braille and graphic correctly, 20 overprints are necessary. VersaWorks allows for up to 10 overprints at one time.

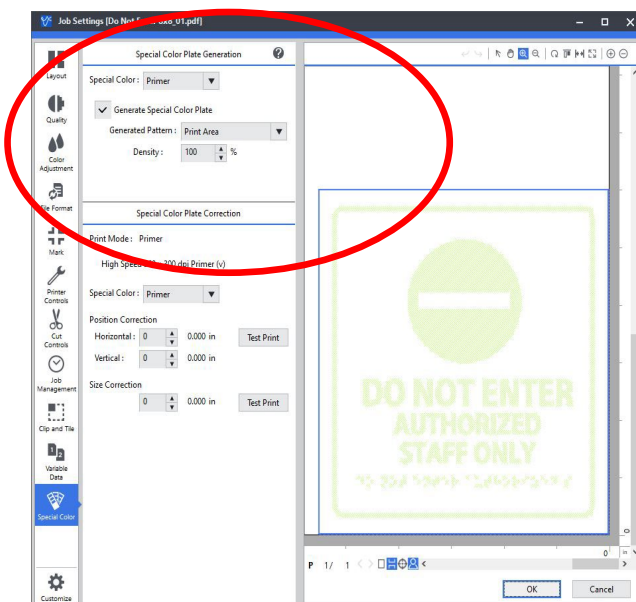
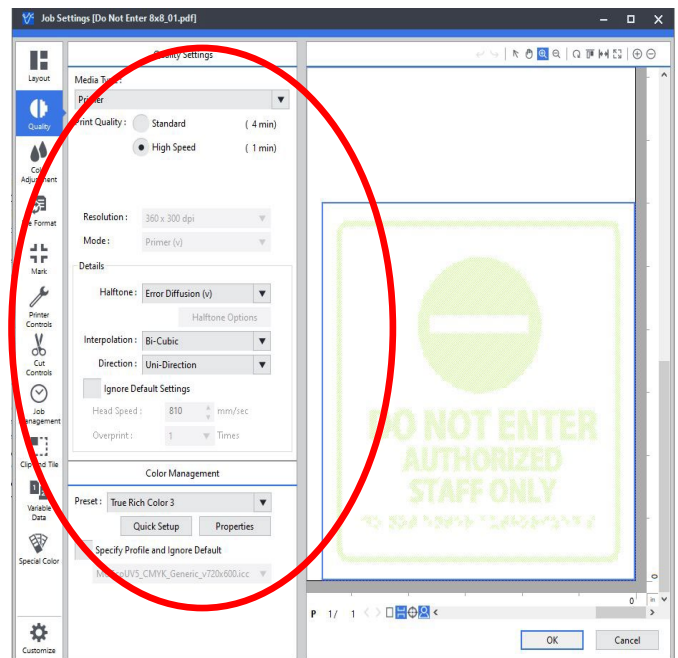
**Print 1 Setup:** The first printing Layer is Primer or Matte Varnish(v).

### 1. Quality Settings

- a. Media Type: Pull Down menu to Special Effects.
- b. Select Print Quality: Standard
- c. Select Mode: **Primer or MatteVarnish(v)**
- d. Select Halftone: Dither
- e. Select Interpolation: Nearest Neighbor
- f. Select Direction: Uni-Directional

### 2. Special Color Settings

- a. Click on Special Color and CHECK Generate Special Color



**Print 2 & 3 Setup:** The second (2<sup>nd</sup>) and third (3<sup>rd</sup>) printing Layer is Embossing(v) with 10 overprints each.

**3. Quality Settings**

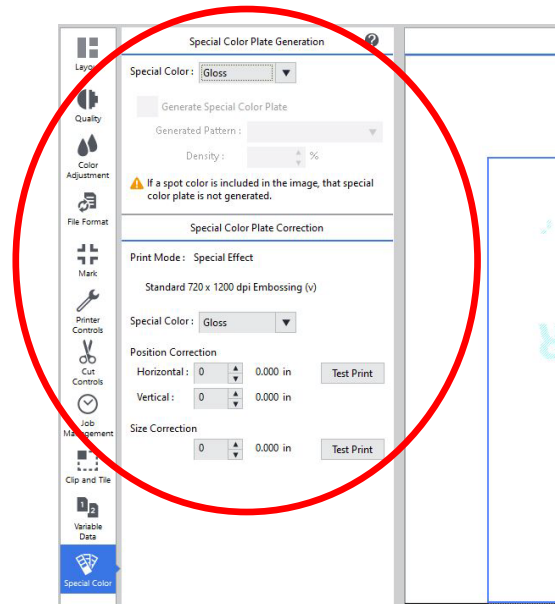
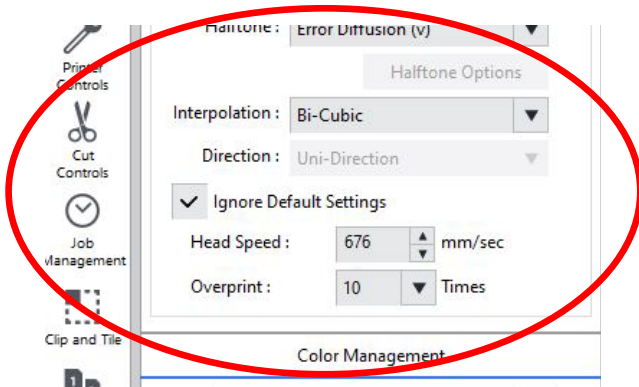
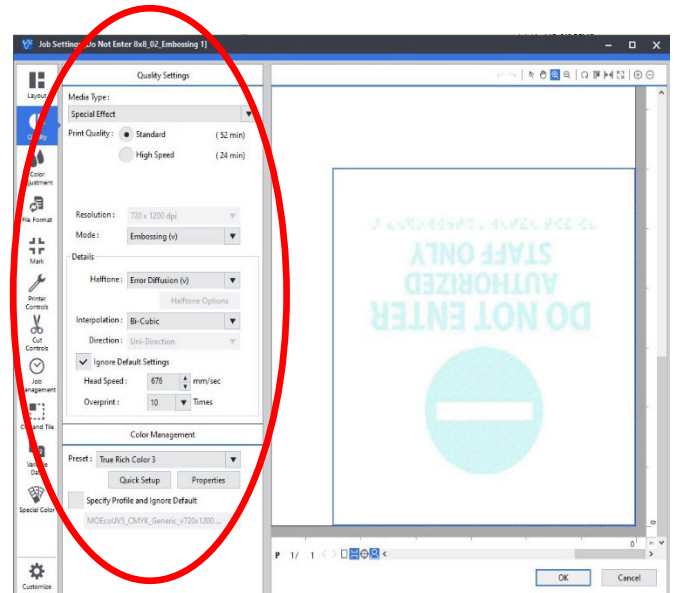
- a. Media Type: Pull Down menu to Special Effects.
- b. Select Mode: High Quality 720 x 720 dpi
- c. Select Mode: **Embossing(v)**.
- d. Select Halftone: Error Diffusion
- e. Select Interpolation: Nearest Neighbor
- f. Select Direction: Uni-Directional

**4. Special Color Settings**

- a. Click on Special Color and CHECK Generate Special Color (as needed)

**5. Printer Controls**

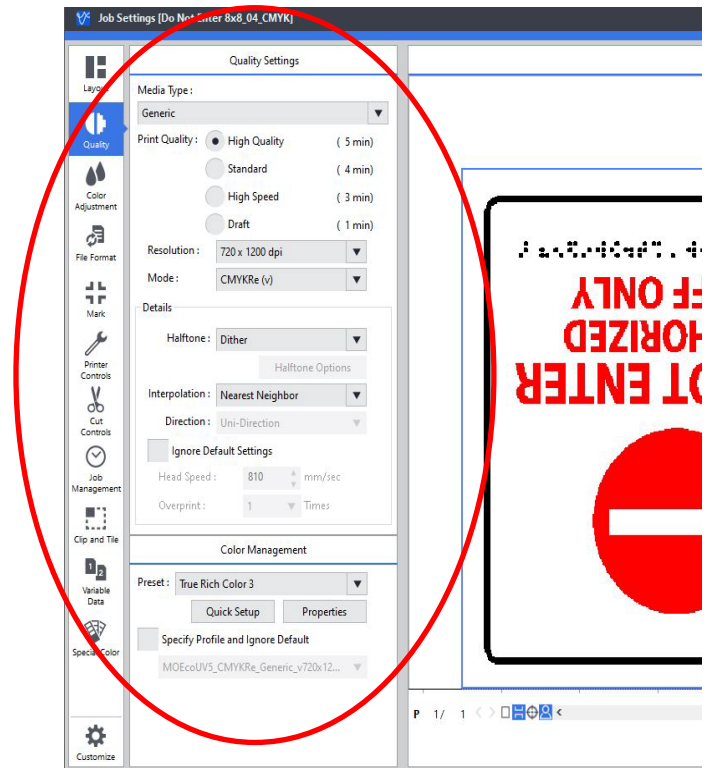
- a. Check Use Custom Settings
- b. Pull Down Overprint to 10



**Print 3 Setup:** The fourth printing Layer is CMYK.

**6. Quality Settings**

- a. Media Type: Pull Down menu to Generic.
- b. Select Mode: Standard 720 x 720 dpi
- c. Select Mode: **CMYK(v)**.
- d. Select Halftone: Dither
- e. Select Interpolation: Nearest Neighbor
- f. Select Direction: Uni-Directional
- g. Select PrePress General in the Color Management Tab

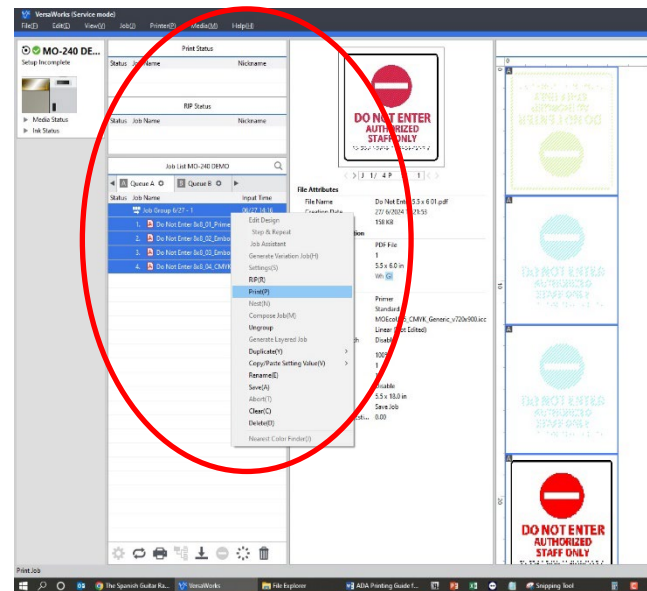


**Final Step:** Print the files using Job Grouping  
(Do Not Enter 8x8\_01.pdf 1-4)

- 1. **Print File 1 Setup** (Primer or Matte Varnish(v) Layer)
- 2. **Print File 2 Setup** (Embossing(v) Layer)
- 3. **Print File 2 Setup** (Embossing(v) Layer)
- 4. **Print File 3 Setup** (CMYK(v) Layer)

**NOTE:**

**Print (or move) each file into Print Queue one file at a time. Each file will RIP, then Print and can be unattended as the 0.040" allowance was given at the initial media Set-Up.**



## Step 4b: Setting Print Settings – CO/CO-I Printers

Braille Signage Printing with the CO/CO-i Printers to achieve .025” - .038” braille dome height

### 4 prints are to be printed

1. **Primer or Matte Varnish** (depending on ink configuration) This will allow good adhesion to media.
2. \***Embossing – 7 overprints**
3. \***Embossing – 7 overprints**
4. **CMYK** This will create the color needed and finish the height for braille printing to the media.

\*In order to sufficiently build the tactile braille and graphic correctly, 14 overprints are necessary. VersaWorks allows for up to 7 overprints at one time.

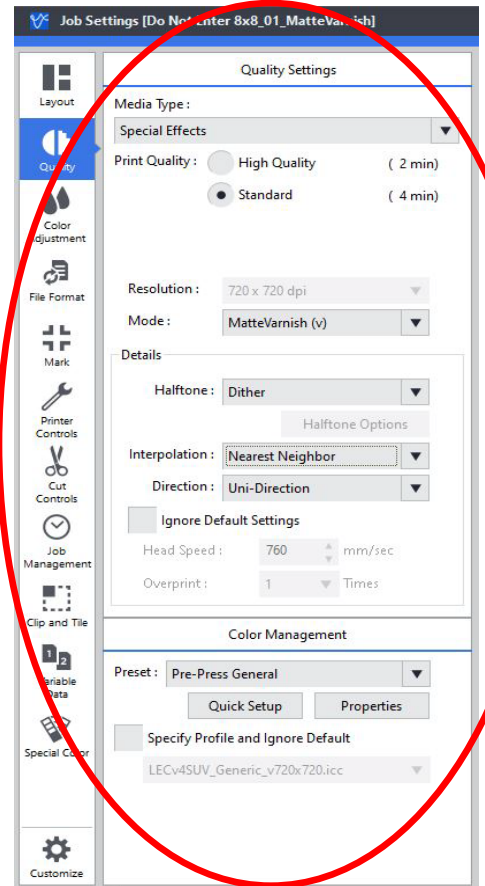
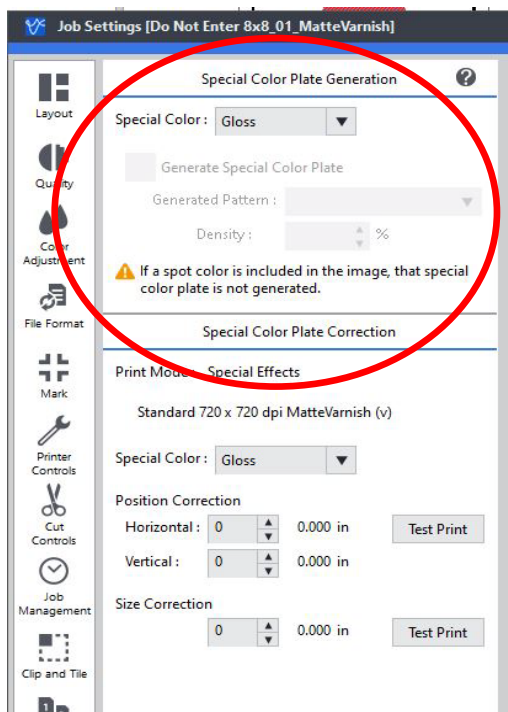
**File 1 Setup:** The first printing Layer is Matte Varnish(v). This will allow good adhesion to media.

### 1. Quality Settings

- a. Media Type: Pull Down menu to Special Effects.
- b. Select Print Quality: Standard
- c. Select Mode: **MatteVarnish(v)**.
- d. Select Halftone: Dither
- e. Select Interpolation: Nearest Neighbor
- f. Select Direction: Uni-Directional

### 2. Special Color Settings

- a. Click on Special Color and CHECK Generate Special Color (as needed)



**File 2 Setup:** The second (2<sup>nd</sup>) and third (3<sup>rd</sup>) printing Layer is Embossing(v) with a total of 14 overprints. This will create most of the needed height for Braille Signage printing to the media.

**3. Quality Settings**

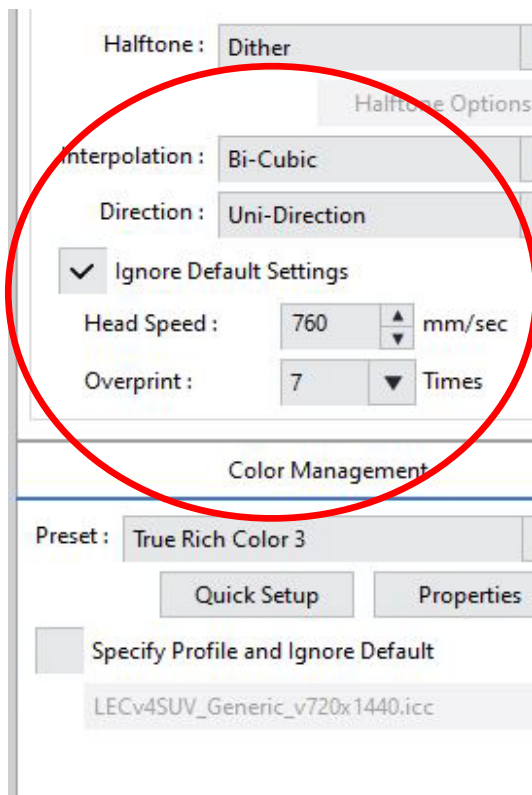
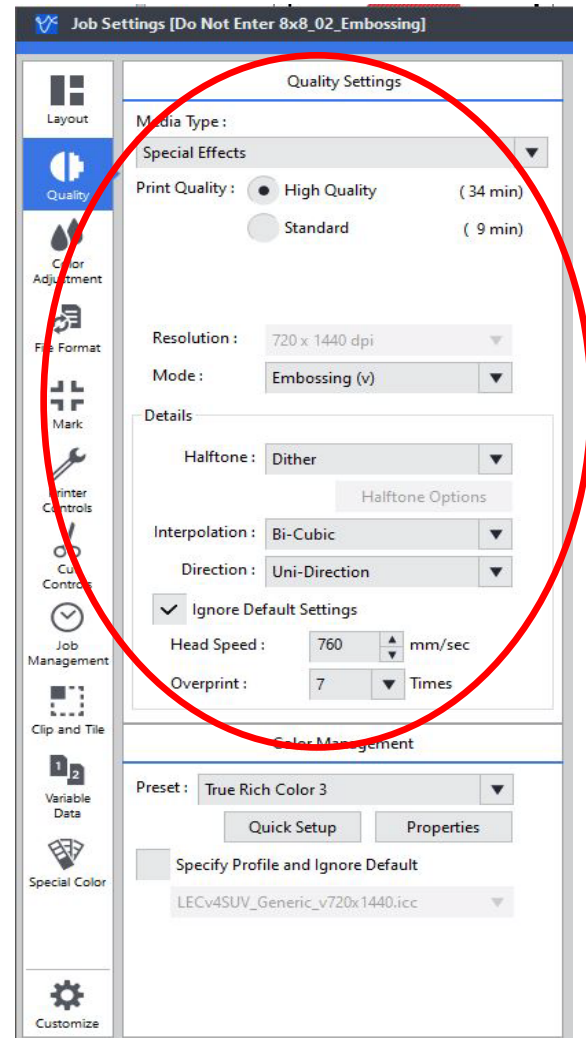
- a. Media Type: Pull Down menu to Special Effects.
- b. Select Mode: High Quality 720 x 1440 dpi
- c. Select Mode: **Embossing(v)**.
- d. Select Halftone: Dither
- e. Select Interpolation: Nearest Neighbor
- f. Select Direction: Uni-Directional

**4. Special Color Settings**

- a. Click on Special Color and CHECK Generate Special Color

**5. Printer Controls**

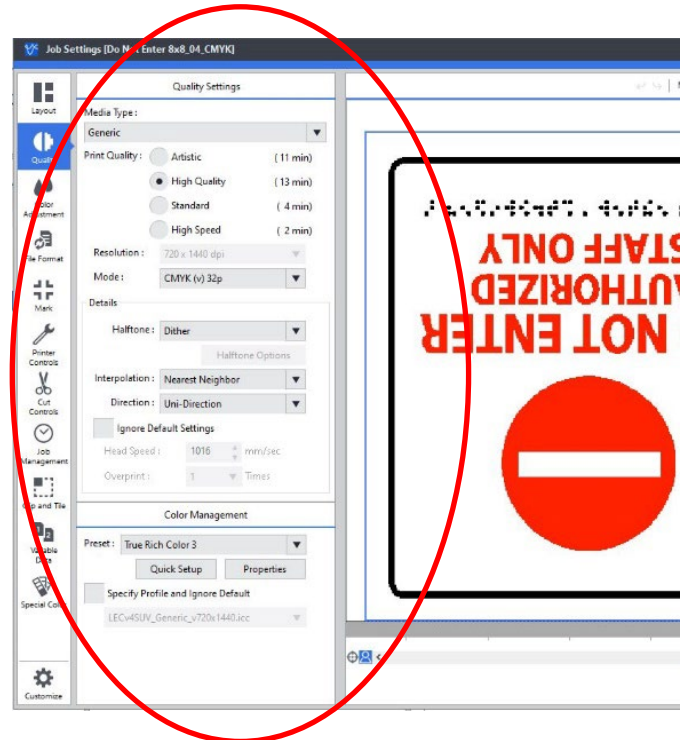
- a. **Check** Use Custom Settings
- b. **Pull Down Overprint to 7**



**File 3 Setup:** The FINAL (4<sup>th</sup>) printing Layer is CMYK. This will create the color needed and finish the height for Braille Signage printing to the media.

## 6. Quality Settings

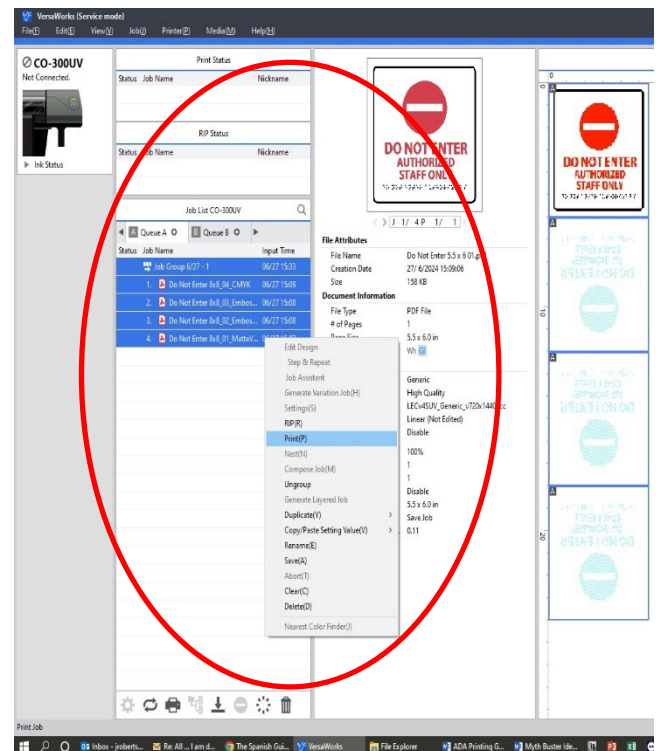
- a. Media Type: Pull Down menu to Generic.
- b. Select Mode: Standard 720 x 720 dpi
- c. Select Mode: **CMYK(v)**.
- d. Select Halftone: Dither
- e. Select Interpolation: Nearest Neighbor
- f. Select Direction: Uni-Directional
- g. Select PrePress General in the Color Management Tab



**Final Step:** Print the files using Job Grouping (Do Not Enter 8x8\_01.pdf 1-4)

7. **Print File 1 Setup** (Matte Varnish(v) Layer)
8. **Print File 2 Setup** (Embossing(v) Layer)
9. **Print File 3 Setup** (Embossing(v) Layer)
10. **Print File 4 Setup** (CMYK(v) Layer)

**NOTE:** Print (or move) each file into Print Queue one file at a time. Each file will RIP, then Print and can be unattended as the 0.040" allowance was given at the initial media Set-Up.



## Summary

### Graphic Qualities - Braille Signage Sign Summary Rules

- Signs that identify a room, space or area shall have raised characters and Braille.
- Signs shall have a non-glare finish with contrasting colors
- Pictograms shall be in their own 6" high field.
- Characters shall be Sans Serif and all Uppercase.
- Characters must be between 5/8" and 2" with a minimum 1/8" Spacing
- Font must be **Braille Signage**. Not too bold, condensed, italic etc.
- 3/8" minimum margin is required around all raised elements including Braille.
- 1" high space is required for one line of Braille.
- Braille shall be all together and 3/8" to 1/2" below last line of text.
- **Braille Signage** signs are required for both public access areas and all employee areas.

### Print Qualities

The included Print Instructions will allow the production of domed, Braille Signage.

**Height: .025" - .038"**

**Base Diameter: .059" - .063"**

**Space between Braille dot: .09" - .10"**

**Space between Cell: .241" - .30"**

**Space between Line: .395" - .40"**

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These are the standard dimensions for Braille from ANSI A117.1 and 2010 ADA Standards. All measurements are in inches.

Measurement	
Dot Height	0.025 to 0.037
Dot Diameter	0.059 to 0.063
Spacing between dots	0.090 to 0.100
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Horizontal Cell Spacing	0.241 to 0.300
Dot Shape	Domed or rounded

#### IMPORTANT:

Check your state laws regarding Braille. Some states, such as California, have their own requirements, which are more strict than these standards.