



**Fight Fraud with Taylor's
Document Security Features**

Fighting Fraud One Document At A Time

Taylor provides numerous counterfeit deterrent solutions for printed, secure products.

Counterfeit and fraudulent documents can lead to lost revenue, damaged brand and a poor customer experience.

The following pages showcase Taylor's available document security features.



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Abrasion Ink

A white transparent ink that appears gray when rubbed with a coin. Some abrasion inks fluoresce under UV lighting.

Alias

- Abrasive inks

Strengths

- The abrasion ink feature is a colorless (hidden upon casual inspection) printed image that can be used as an authentication and verification feature.
- This feature cannot be photocopied or reproduced by conventional means and offers moderate protection against copying, scanning and counterfeiting.

Liabilities

- Smooth uncoated and coated papers (matte or gloss finish) can create a reflectance difference in the printed image, causing the undeveloped message to become more visible.



Artificial Watermark

Symbols printed on the document in white or transparent non-penetrating ink, which is visible to the human eye when viewed at a 45-degree angle. May also be visible under black light when fluorescent materials are added.

Related Terms

(both of these technologies penetrate the sheet)

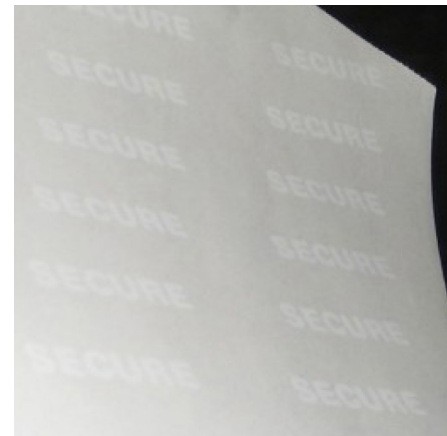
- Simulated watermark
- Transmark

Strengths

- Real and simulated watermarks have a distinct appearance which does not replicate well. They provide moderate protection against copy and counterfeit.

Liabilities

- Image can be difficult to see, especially when overprinted with laid lines or screens.



Chemical Pen

The chemical used in this pen unveils an invisible mark or message which can be used to authenticate the document as an original.

Strengths

- Can be used to field-authenticate a document by activating the tamper-evident void feature.

Liabilities

- Chemical pens tend to dry out. Most activating chemicals are flammable or emit strong odors.

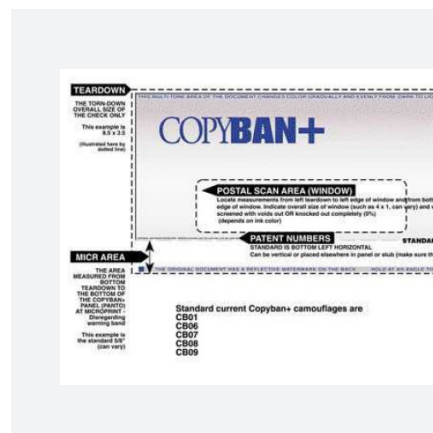


CopyBan+

CopyBan+ pantographs are designed to discourage unauthorized duplication on color copiers by providing multi-tone, graduated-screen areas that respond to different copier adjustments.

Strengths

- Rows of VOID appear on what might otherwise be considered a passable copy of the original document.



CopyBan Capture

Copyban Capture void pantographs improve upon SUPER-SAFETY™ and CopyBan+ technologies and are designed to require low disk storage space when processed on image capture systems.

Competitive Tradenames

- SecureScan™

Strengths

- Primarily intended to discourage replication of documents on color copiers, these pantographs have been tested successfully on a limited number of black and white copiers.
- When used in conjunction with additional security devices like artificial watermarks, thermochromic printing and other non-scanable features, CopyBan Capture provides an excellent level of protection against replication.



Custom Screen Halftone

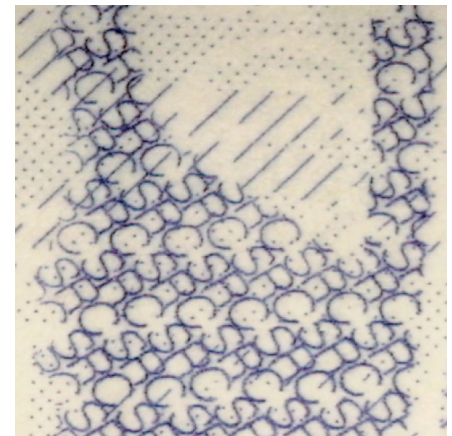
A replacement for a conventional halftone screen. Instead of dots, the screened image is made from simple letters or shapes and applied to continuous tone images or photo art.

Strengths

- Under a magnification of 8x or more, an observer can authenticate the document by identifying the characters that make up the screen.

Liabilities

- Difficult to authenticate without magnification.



Custom Step and Repeat Pantograph

Used with void pantographs, however, the camouflage is a customized repeating pattern.

Strengths

- Adds an additional level of customization to the face of the document.

Liabilities

- Custom designs may be prohibitively expensive.



Defaced Voucher

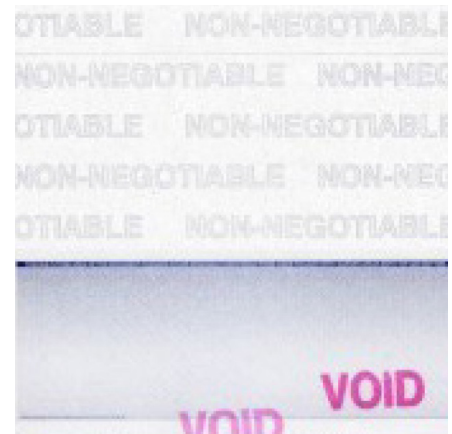
Background printing across otherwise blank areas of a document intended to prohibit use of the voucher to create a counterfeit. Sometimes logos or seals are used in place of text for a more customized appearance.

Strengths

- A simple modification to most check designs. Pre-printing the blank section of a document with “Non-Negotiable” or other imagery makes it more difficult to use as a source of safety paper in counterfeits.
- When utilizing the same ink color to print the defacing imagery, no additional print stations are necessary.

Liabilities

- Light background pattern creates some “noise” against printed text.



Dual-Image Numbering

Dual-image numbers use ink that contains two different components: black and red. The black component is visible on the front and is surrounded by a red halo. The red component penetrates the paper fibers into the document and is usually visible on the back of the sheet.

Alias

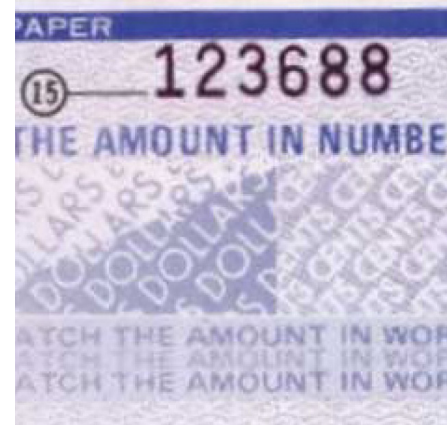
- Dual-component numbering
- Red penetrating number

Strengths

- Penetrating inks offer limited protection against color copy and counterfeit.

Liabilities

- Two-sided color copies can mimic originals.



Embossing

A local patterned distortion of the paper using matched sets of dies resulting in a raised surface on one side of the document and a depressed surface on the other. This feature is often used for certificates.

Strengths

- Embossing offers a moderate level of security as it cannot be easily copied or counterfeited.
- The 3D image can be sensed by touch and the detail is difficult to reproduce.

Liabilities

- Embossing often does not work well on papers run through sheet feeders and xerographic printers (laser printers and copiers).



Fibers

Colored and fluorescent fibers are embedded in the paper at manufacture and become part of the base sheet. Fluorescent fibers glow when exposed to ultraviolet light.

Alias

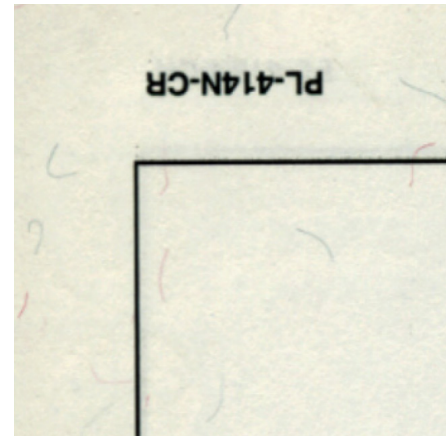
- Colored fibers
- Fluorescent fibers

Strengths

- Moderate protection against copy and counterfeit.

Liabilities

- The random nature of colored fibers makes it possible to emulate their appearance with a color printer. The fibers must be examined carefully to authenticate.
- Fluorescing fibers require a black light to authenticate.



Fluorescent Inks

Fluorescent inks are used in images or words printed on the document that are difficult to see by the human eye unless exposed under an ultraviolet black light.

Long/short wave fluorescent ink is a colorless or transparent ink that fluoresces under an ultraviolet light source. The ink fluoresces two different colors depending on the wavelength of UV light — red at a short wavelength, and blue at a long wavelength.

Alias

- Fluorescing watermark

Strengths

- Moderate protection against copy and counterfeit.

Liabilities

- Requires a black light to authenticate.



Foil Stamp

Metallic foil or film attached to the form, usually with a heated engraved die.

Alias

- Hot foil stamp

Strengths

- Like holograms, metallic foils offer a premium appearance which cannot be copied or easily counterfeited.

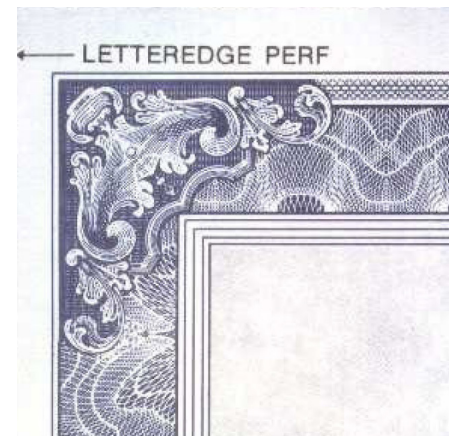


High-Resolution Borders

Intricate white line patterns against a solid or screened dark background. High-resolution borders distort when scanned or copied. Graduated borders change in darkness from the outside edge to the inside edge.

Strengths

- High-resolution imagery adds an aura of authenticity to a document. Offers a moderate level of security as HR images are difficult to reproduce.
- High-resolution borders provide a covert location for other safety features like latent images and microprint.



Holograms

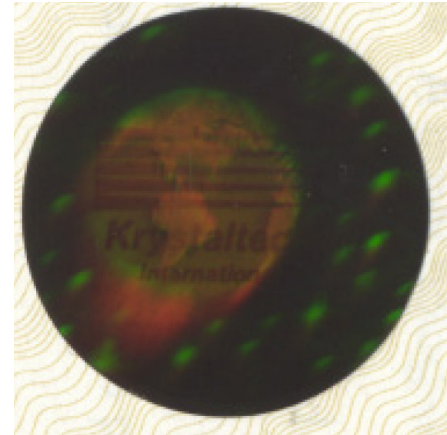
Holograms give the illusion of a solid object that changes appearance and sometimes seems to move when viewed from slightly different angles and sources of light.

Strengths

- Attractive and easy to verify
- Difficult to replicate

Liabilities

- Made from films and metallic foils. Holograms must be attached to forms like a foil stamp, rendering them vulnerable to removal.
- Stamps are applied to the top of the base sheet. Pack buildup can occur.
- Holograms tend to be more expensive than other print-based security technologies.



Intaglio

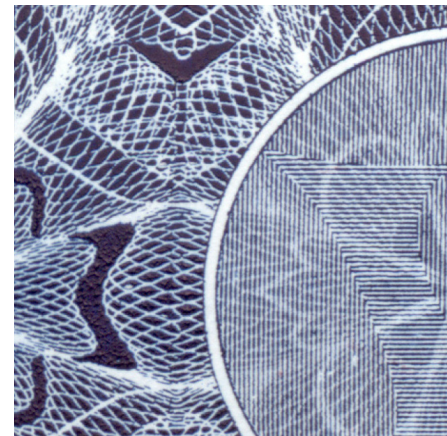
Intaglio printing uses an engraved plate to apply ink directly onto the form. This process usually results in a slightly embossed effect of the inked image and, in cases where the plate is smaller than the form, the form itself.

Strengths

- The embossed feel of the image is difficult to replicate.

Liabilities

- The high pressure of the intaglio print process often smooths the sheet beyond the specifications of most laser printers, resulting in poor toner anchorage.



Gray Laid Lines

Evenly spaced lines in a specially formulated gray ink that makes alteration by cut-and-paste difficult.

Strengths

- Laid lines offer a distinct look for the back of the document and are difficult to accurately replicate with desktop inkjet printers.
- Laid lines make cut-and-paste alterations easier to detect.

Liabilities

- Laid lines can impact image capture data size.



Laid Lines (Enhanced)

Unevenly spaced and sized diagonal lines in a specially formulated gray ink that makes alteration by cut-and-paste difficult.

Strengths

- Enhanced laid lines offer a distinct look for the back of the document and are difficult to accurately replicate with desktop inkjet printers.
- Laid lines make cut-and-paste alterations easier to detect.

Liabilities

- Laid lines can impact image capture data size.



Microdots

A series of very small circles with differing dot sizes within them. This feature is used as both a quality control device and a semi-covert security image, as these are not reproducible on most scanners and copiers.

Alias

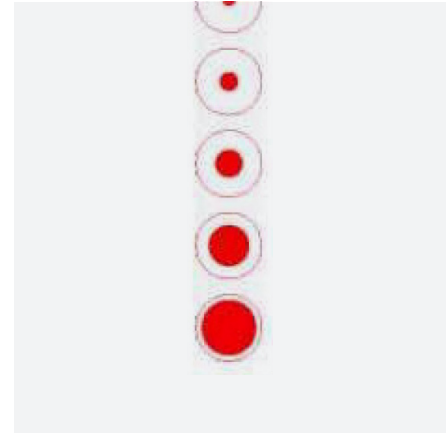
- DQI's (dot quality indicators)

Strengths

- Very good protection against color and B/W copying. At this time, it is not possible to replicate the microdot feature through photocopying.

Liabilities

- A loupe or other form of optical magnification is required.



Microprinting

Microprinting is a reduced line of type (perhaps one point) that appears as a solid or dashed line until viewed under magnification, when the image will appear as characters, words, or phrases.

Strengths

- Most copiers and scanners, unless those capable of very high dots-per-inch quality, will see the printing as an indistinguishable solid line.

Liabilities

- Requires magnification to authenticate.



Optically Variable Ink

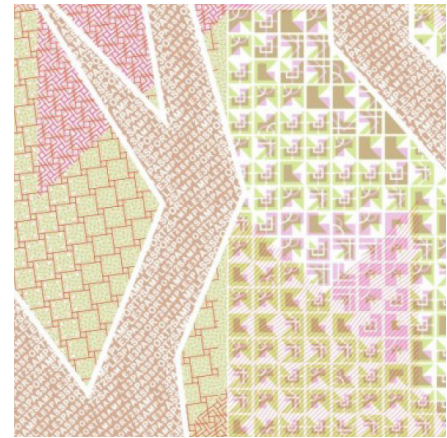
Ink that changes color when viewed at different angles.
Commonly found on redesigned U.S. currency.

Alias

- OVI

Strengths

- Field-authenticatable security device for those trained in detection. Excellent copy and counterfeit protection.



Payee Protection Font

An alphanumeric font that makes modification of the payee and legal amount fields more difficult.

Strengths

- The unique appearance of the font requires forgers to match the typeface when attempting alterations of the payee and legal amount fields.

Liabilities

- The font is relatively easy to replicate and manipulate with conventional graphic editing tools and offers limited protection against copying.



Prismatic Print

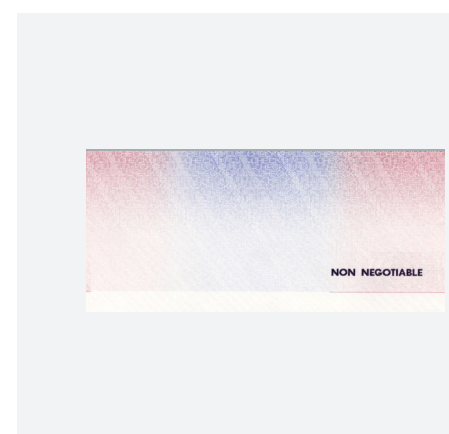
Two or more colors blended together on one document.

Strengths

- Prismatic print is difficult to copy and extremely difficult to counterfeit on color printers, forcing the forger to replicate two colors and maintain print registration in the process.

Liabilities

- Prismatic printing requires two colors and marginally increases cost.



Protection Panels

Special areas or zones with unique text and/or graphic backgrounds intended to make copy and alteration easier to detect.

The amount protection panel (shown here) has specially designed text placed in the alpha and courtesy amount fields of the check. The patterned background makes alteration by the cut-and-paste methodology difficult without detecting a change in the background design.

The cut-and-paste protection panel is a block of specially designed printed text that is placed on the back of the document on the reverse side of the courtesy amount field. The patterned background makes alteration by the cut-and-paste methodology difficult without detecting a change in the background design.

Signature protection panel is a block of intricately printed text using a combination of varied sizes of microprinting and a “void” pantograph message that appears under many settings of color copiers and scanners to protect against signature alteration or duplication.

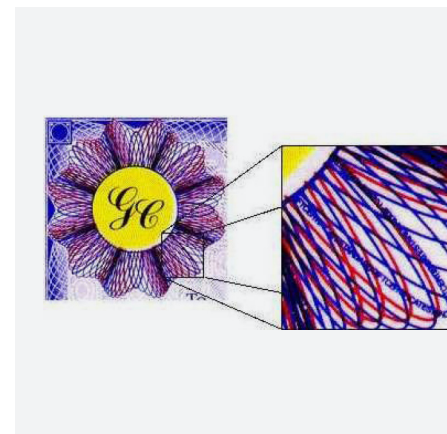


Rosettes

Complex line art made with fine high-resolution lines developed into continuous curved patterns.

Unique Considerations

Rosettes can be placed over a solid, graduated or flat screened background. The fine lines may be two colors and may include other security features (like microprinting). Rosettes are often applied to gift certificates and other elegant security documents where a currency-like look is desirable.



Security Shield Plus

A tamper-evident coating containing a hidden void feature. Under normal handling, the spot is not apparent but an erasure attempt or contact with solvents will activate the coating and the “void” will appear.

Alias

- Tamper-evident coating
- Security shield + void

Strengths

- Provides good protection against erase or rub alterations.
- Provides protection against solvents like acetone and alcohol. Also protects against pick-and-erase alterations.



Secure Number Font

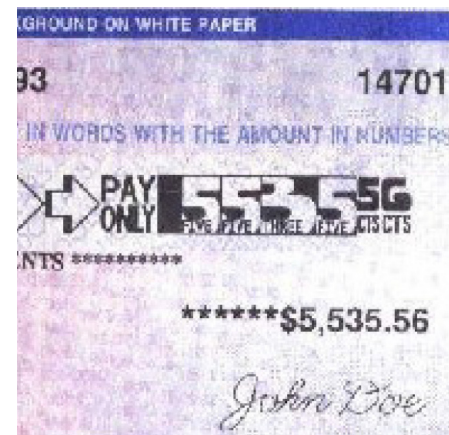
Non-traditional amount font with characters of varying size and shape.

Strengths

- The unique design and controlled distribution of the font makes counterfeit difficult.
- Designed for use on most Taylor MICR printers as well as most popular high-speed MICR laser printers.

Liabilities

- Some find the unusual appearance of this font unappealing.



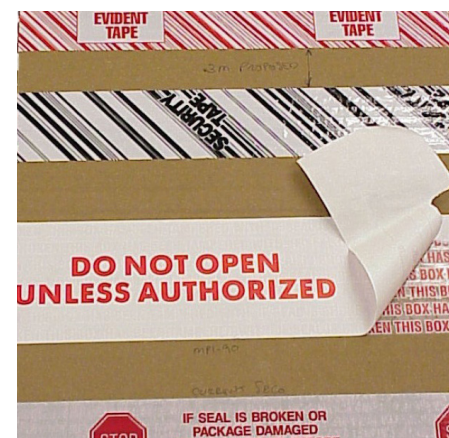
Security Tape

Security tape is designed to reveal when a package has been opened or tampered with.

Some types of security tape function as a primary sealing tape and include laid lines which are very difficult to cut and reseal without obvious notice of tampering. Other types of tape act more like a label or seal and leave a warning message when the top layer is removed.

Strengths

- Security tapes help protect valuable materials while in shipment and storage.



Security Thread

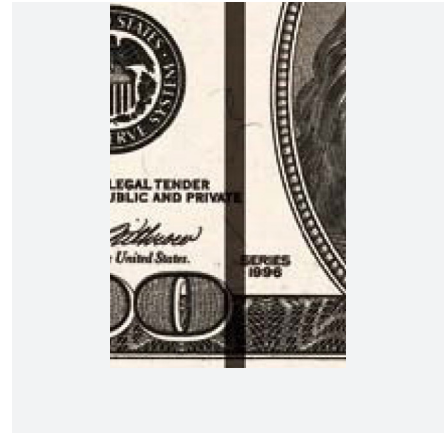
A polymer or metallic thread embedded directly into the paper. In the case of new U.S. currency, a thread with the note's denomination can be seen from both sides of the note when held up to a bright light (words are not shown in this illustration). Additionally, the thread glows when held under an ultraviolet light.

Strengths

- Very effective against copy and counterfeit.

Liabilities

- Cost



Tamper-Evident Coating

A protective chemical coating that activates a "VOID" word in three languages when exposed to bleach, solvents or hypochlorites commonly used to alter a document.

Alias

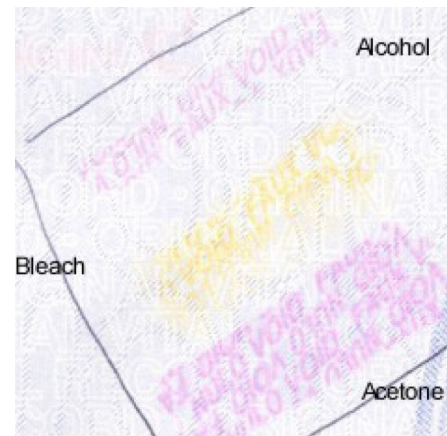
- Fluorescing watermark

Strengths

- Provides moderate protection against chemical alteration of the image (although fine use of chemicals can limit visibility of the voids).
- Can be used to field-authenticate a document with the use of a chemical pen or some bleach.

Liabilities

- Taylor's line of laser-compatible coatings are currently limited to bleach activation although some other mill-grade papers do support full chemical sensitivity on laser stocks.



Thermochromic Ink

Ink that changes color or disappears when warmed and returns back to the original color upon cooling.

Alias

- Mood ink

Strengths

- This feature provides a good level of protection against copy and counterfeit and can be easily authenticated in the field without special equipment.

Liabilities

- Limited lightfastness if exposed to direct sunlight or extended fluorescent office lighting.
- Susceptible to strong solvents and abrasion.



Toner Lock

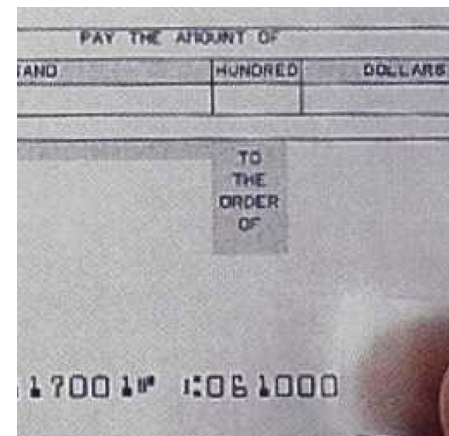
Laser lock is a clear coating printed over sensitive areas of the document to protect against alteration of printing by non-impact methods in those areas. The coating makes removal of laser printer toner extremely difficult as compared with untreated paper.

Strengths

- Some printer and paper combinations offer poor toner bonding. Poor bonding makes documents easier to alter. By coating the paper with laser lock or a similar bonding agent the image is more permanent, making alteration much more difficult.

Liabilities

- Most toners today adhere very well to bond stocks resulting in little or no improvement when a special coating is added.



Void Pantograph

Void pantographs are warning messages hidden in decorative printed pantograph backgrounds which are difficult to reproduce and provide effective protection against color copier fraud. Void pantograph technology displays a warning message “void” when copied on a range of standard settings.

Strengths

- Provides protection against color copying.

Liabilities

- Offers little protection against scanning and printing.
- Spot laser lock and similar spot coatings can adversely affect color copy performance.



Warning Band

Text on the face of the document which informs the person handling or accepting the item of which security features should be present.

Strengths

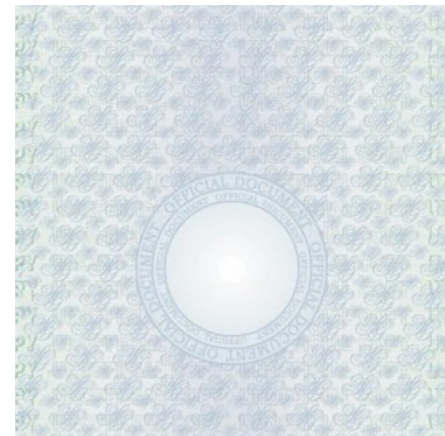
- Encourages verification of the document and discourages criminal activity.

Liabilities

- Often ignored

Unique Considerations

- Bottom Warnings — ANSI X9.13 Specifications for Placement and Location of MICR Printing state that an optical clear band is located 0.150" above the aligning (bottom) edge. Any non-magnetic border or warning band below that dimension is within specifications.



LEARN MORE

Find out how Taylor is using meticulous research and industry-leading technology to fight document fraud before it occurs.

Visit the site below for more information:

taylor.com



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