**Digitization Standards**

**Books**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Preservation Copy** | **Access Copy Large** | **Access Copy Small** | **Access Copy PDF** |
| **Format Type** | **Books** | | | |
| **File Type** | .TIFF | .JPEG | .JPEG | .PDF/A |
| **Compression** | uncompressed | JPEG compression Photoshop level 10-12 | JPEG compression Photoshop level 10-12 | Minimum compression |
| **Resolution** | 600 dpi | 300 dpi | 1000 pixels shortest edge | 300 dpi |
| **Bit Depth** | 8 bit color  (24 bit) | 8 bit color  (24 bit) | 8 bit color  (24 bit) | 8 bit color  (24 bit) |
| **Color Space** | SRGB or Adobe RGB | sRGB | sRGB | sRGB |

**Documents**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Preservation Copy** | **Access Copy Large** | **Access Copy Small** | **Access Copy PDF** |
| **Format Type** | **Handwritten Documents** | | | |
| **File Type** | .TIFF | **.**JPEG | **.**JPEG | **.**PDF/A |
| **Compression** | uncompressed | JPEG compression Photoshop level 10-12 | JPEG compression Photoshop level 10-12 | Minimum compression |
| **Resolution** | 600 dpi | 300 dpi | 150 dpi | 300 dpi |
| **Bit Depth** | 16 bit color  (48 bit) | 8 bit color  (24 bit) | 8 bit color  (24 bit) | 8 bit color  (24 bit) |
| **Color Space** | sRGB or Adobe RGB | sRGB | sRGB | sRGB |
| **Format Type** | **Typed Documents** | | | |
| **File Type** | .TIFF | .JPEG | .JPEG | **.**PDF/A |
| **Compression** | uncompressed | JPEG compression Photoshop level 10-12 | JPEG compression Photoshop level 10-12 | Minimum compression |
| **Resolution** | 600 dpi | 300 dpi | 150 dpi | 300 dpi |
| **Bit Depth** | 16 bit color  (48 bit) | 8 bit color  (24 bit) | 8 bit color  (24 bit) | 8 bit color  (24 bit) |
| **Color Space** | sRGB or Adobe RGB | sRGB | sRGB | sRGB |

**Photographs**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Preservation Copy** | **Access Copy Large** | **Access Copy Small** |
| **Format Type** | **Photographs** | | |
| **File Type** | .TIFF | .JPEG | .JPEG |
| **Compression** | uncompressed | JPEG compression Photoshop level 10-12 | JPEG compression Photoshop level 10-12 |
| **Resolution** | 600 dpi | 300 dpi | 150 dpi |
| **Bit Depth** | 16 bit color  (48 bit) | 8 bit color  (24 bit) | 8 bit color  (24 bit) |
| **Color Space** | Adobe RGB or ProPhoto RGB | sRGB | sRGB |

**Negatives and Slides**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Preservation Copy** | **Access Copy Large** | **Access Copy Small** |
| **Format Type** | **Negatives** | | |
| **File Type** | .TIFF | .JPEG | .JPEG |
| **Compression** | uncompressed | JPEG compression Photoshop level 10-12 | JPEG compression Photoshop level 10-12 |
| **Resolution** | 4000 dpi | 600 dpi | 300 dpi |
| **Bit Depth** | 16 bit color  (48 bit) | 8 bit color  (24 bit) | 8 bit color  (24 bit) |
| **Color Space** | ProPhoto RGB or  Grey Gamma 2.2 | sRBG or Grey Gamma 2.2 | sRBG or Grey Gamma 2.2 |
| **Format Type** | **Slides** | | |
| **File Type** | .TIFF | .JPEG | .JPEG |
| **Compression** | uncompressed | JPEG compression Photoshop level 10-12 | JPEG compression Photoshop level 10-12 |
| **Resolution** | 4000 dpi | 600 dpi | 300 dpi |
| **Bit Depth** | 16 bit color  (48 bit) | 8 bit color  (24 bit) | 8 bit color  (24 bit) |
| **Color Space** | ProPhoto RGB or  Grey Gamma 2.2 | sRBG or Grey Gamma 2.2 | sRBG or Grey Gamma 2.2 |

**Objects**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Preservation Copy** | **Access Copy Large** | **Access Copy Small** | **Access Copy PDF** |
| **Format Type** | **Objects** | | | |
| **File Type** | .TIFF | .JPEG | .JPEG | .PDF/A |
| **Compression** | uncompressed | JPEG compression Photoshop level 10-12 | JPEG compression Photoshop level 10-12 | Minimum compression |
| **Resolution** | 600 ppi | 300 ppi | 300 ppi | 300 ppi |
| **Bit Depth** | 16 bit color  (48 bit) | 16 bit color  (48 bit) | 16 bit color  (48 bit) | 16 bit color  (48 bit) |
| **Color Space** | sRGB | sRGB | sRGB | sRGB |

**Audio Formats**

|  |  |  |
| --- | --- | --- |
|  | **Preservation Copy** | **Access Copy** |
| **Format Type** | **Cassettes** | |
| **File Type** | .WAV | .MP3 |
| **Encoding** | LPCM (Linear Pulse Code Modulation) | LPCM (Linear Pulse Code Modulation) |
| **Sampling Frequency** | 96 kHz | 48 kHz |
| **Bit Depth/Rate** | 24-bits | 24-bits |
| **Audio Channel** | Same as original | Same as original |
| **Format Type** | **Microcassettes** | |
| **File Type** | .WAV | .MP3 |
| **Encoding** | LPCM (Linear Pulse Code Modulation) | LPCM (Linear Pulse Code Modulation) |
| **Sampling Frequency** | 96 kHz | 48 kHz |
| **Bit Depth/Rate** | 24-bits | 24-bits |
| **Audio Channel** | Same as original | Same as original |
| **Format Type** | **33.33 and 45 RPM Records** | |
| **File Type** | .WAV | .MP3 |
| **Encoding** | LPCM (Linear Pulse Code Modulation) | LPCM (Linear Pulse Code Modulation) |
| **Sampling Frequency** | 96 kHz | 48 kHz |
| **Bit Depth/Rate** | 24-bits | 24-bits |
| **Audio Channel** | Same as original | Same as original |

**Video Formats**

|  |  |  |
| --- | --- | --- |
|  | **Preservation Copy** | **Access Copy** |
| **Format Type** | **VHS and VHS-C** | |
| **File Type** | .MOV | .MPEG-4 (.MP4) |
| **Video Codec** | Uncompressed | av1 |
| **Bit Depth/Rate** | 10 bit | 8 bit |
| **Frame Size** | 486 x 720 | 480 x 720 |
| **Frame Rate** | 29.97fps | 29.97 fps |
| **Color Space** | Rec. 601 YUV | YUV |
| **Chroma Subsampling** | 4:2:2 | 4:2:0 |
| **Audio Stream** | 48kHz/24-bit PCM | 48kHz/ AAC, 157 Kbps – 160 Kbps stream bitrate, 2 Channels |
| **Format Type** | **16 mm Film** | |
| **File Type** | .MOV | .MPEG-4 (.MP4) |
| **Video Codec** | Uncompressed | av1 |
| **Bit Depth/Rate** | 10 bit | 8 bit |
| **Frame Size** | 486 x 720 | 480 x 720 |
| **Frame Rate** | 24 fps | 24fps |
| **Color Space** | Rec. 601 YUV | YUV |
| **Chroma Subsampling** | 4:2:2 | 4:2:0 |
| **Audio Stream** | 48kHz/24-bit PCM | 48kHz/ AAC, 157 Kbps – 160 Kbps stream bitrate, 2 Channels |

**Large Format Materials (above 8.5 x 11 inches)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Preservation Copy** | **Access Copy Large** | **Access Copy Small** | **Access Copy PDF** |
| **Format Type** | **Oversize Documents** | | | |
| **File Type** | .TIFF | .JPEG | .JPEG | .PDF/A |
| **Compression** | uncompressed | JPEG compression Photoshop level 10-12 | JPEG compression Photoshop level 10-12 | Minimum compression |
| **Resolution** | 600 dpi | 300 dpi | 150 dpi | 300 dpi |
| **Bit Depth** | 16 bit color  (48 bit) | 8 bit color  (24 bit) | 8 bit color  (24 bit) | 8 bit color  (24 bit) |
| **Color Space** | sRGB or Adobe RGB | sRGB | sRGB | sRGB |
| **Format Type** | **Oversize Photographs** | | | |
| **File Type** | .TIFF | .JPEG | .JPEG |  |
| **Compression** | uncompressed | JPEG compression Photoshop level 10-12 | JPEG compression Photoshop level 10-12 |  |
| **Resolution** | 600 dpi | 300 dpi | 150 dpi |  |
| **Bit Depth** | 16 bit color  (48 bit) | 8 bit color  (24 bit) | 8 bit color  (24 bit) |  |
| **Color Space** | sRGB or Adobe RGB | sRGB | sRGB |  |