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UHD DOLBY VISION AND SDR SERVICING MASTERS
TECHNICAL SPECIFICATIONS

QUALITY CONTROL:

Each video element will be subject to a technical and mastering quality control process to ensure quality and adherence to Lionsgate's specifications. The QC will be performed by a 3rd party vendor. Based on the QC report, additional changes and/or fixes to the video elements may be required.

GENERAL GUIDELINES:

Use final color graded DI/DSM files and render at native resolution to UHD.

If the original language of the film is not English, each master is required to be delivered non-subtitled with separate English Subtitles in the. itt and. ttml (IMSC 1.0) formats. Subtitles can be delivered via Aspera or Email.

If there is any foreign language spoken within the film requiring Forced Narrative Subtitles, please flag prior to delivery. Lionsgate will confirm if the masters should be delivered Non-Subtitled, based on the amount of foreign language spoken within the film.

Separate delivery of the Forced Narrative Subtitles will be required in the. itt and. ttml (IMSC 1.0) formats. Subtitles can be delivered via Aspera or Email.

If there is 20 minutes or more of textless sections, than separate Texted and Textless masters may be required. The textless master will include all credits with only the text within the feature removed. If any credits appear over picture, textless sections for those sections shall be included at tail of the textless master.

Features are to be recorded as a continuous program (i.e. no breaks between reels) and will have continuous time code without interruptions.

If the film has been or is scheduled to be rated by the MPA, the MPA logo with certificate number is required to be included within the end crawl prior to delivery.

VITC: No / Visible TC: No

As these are master files, no forensic or invisible watermarking.

Please reference SMPTE standards which is 93% Action Safe / 90% Title Safe.

All versions MUST have matching time codes.

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LIONSGATE LOGO:

* **Upon request Lionsgate will provide a BOX link to all of the Lionsgate Logo assets including:**
  * 4K TIF Files in Scope and Flat formats
  * 2K TIF Files in Scope and Flat formats
  * Logo Audio – 7.1, 5.1 and 2.0 mixes
  * End Logo – TIF card in Scope and Flat formats
  * HD ProRes files in all Aspect Ratios
  * UHD-SDR ProRes files in all Aspect Ratios

OPENING LOGO:	• The Lionsgate 20 second animated logo is required to be added in position 1 to the all masters prior to delivery unless previous approval was given to waive this requirement. • The Lionsgate logo audio is to be used unless previous approval was given to use feature/program audio.
END LOGO:	• The Lionsgate End Logo is required to be added after the end crawl unless previous approval was given to waive this requirement. • The still image should fade up after the end crawl, hold for 3 seconds, and then fade out. • If other end logos are present, Lionsgate logo should be last unless previous approval was given to waive this requirement.

LIONSGATE SLATE REQUIREMENTS:

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Feature Title
File Format/Specifications
Aspect Ratio / Color Space / Frame Rate
Run Time
Audio Configuration
Native Language of program
Textless Backgrounds w/time code they start
Date of Creation
Post Facility

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UHD/DOLBY VISION SPECIFICATIONS:

* Delivery on LTO7 (LTFS format) required. Upon Request files can be delivered directly to the Lionsgate QC vendor via Aspera. Once the file is QC approved, Lionsgate will archive to LTO as distribution expense.

* Zero based timecode is acceptable for HDR files upon request.

* File naming convention:
Title_Feat_UHD_DoVi_Rec2020_RGB_444F_J2K_3840x2160_2398_AspectRatio_MOS_Date.mxf

REQUIRED DELIVERABLE:	• One (1) UHD/Dolby Vision Servicing master in the Original Aspect Ratio (2.40, 2.39, 2.35, 2.00, 1.85, or 1.78) of the film.
DOLBY VISION VERSION:	• CM4.0 Preferred • 2.0.5 (CM2.9) Acceptable upon request
FILE/HEAD FORMAT:	• Black (1 frame) • Slate (10 seconds) • Black (60 seconds) • First frame of program (01:00:00:00) • Black (60 seconds) • Textless Material • Black (1 frame)
VIDEO FILE FORMAT:	• MXF
RESOLUTION:	• UHD: 3840x2160
FRAME RATE:	• 23.98
VIDEO FILE SPECIFICATIONS:	• IMF-Compatible Longplay MXF File (App2 Extended Revision) • JPEG2000 Profile: 4K IMF Single/Multi-tile Reversible Profile (Lossless Compression) • JPEG2000 Operating Level: Main Level 6 • JPEG2000 Operating Sublevel: Sublevel 0 (Sublevel 3 accepted upon request)
IMAGE CHARACTERISTICS:	• ST2084 (PQ) • BT.2020 • P3 in a rec2020 container accepted • RGB • 12-BIT • Full Range

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VIDEO LEVELS:	• Preferred to have it mastered at 4,000 nits. • Can be mastered at 1,000 nits upon Lionsgate approval. • 100 nit trim passes required • Black level: Black Level (0.0001)
AUDIO:	• MOS
TEXTLESS:	• Delivered at tail of program. • Can be delivered as separate file upon request. • There should be 2 seconds of black between each section, with timecode corresponding to the texted sections

DOLBY VISION XML METADATA (CONFORMED)	• Separate XML Sidecar metadata file
	
	• All metadata must match specs of the MXF file including resolution, color space, and aspect ratio.
	
	• Must include following values:
	  ▪ MaxFALL
	  ▪ MaxCLL
	  ▪ White Level peak
	  ▪ Black Level
	  ▪ Transfer function (PQ)
	  ▪ Primaries (Rec2020 or P3)
	
	• If mastered at 4,000 nit, the metadata must contain data for 1,000 nit trim pass
	
	• 100 nit trim pass required
	
	• Metadata must cover the textless sections at tail of the program.

LTO LABEL INFORMATION: ***Be sure to label both tape and case**	FULL TITLE UHD/Dolby Vision Servicing Master - IMF-Compatible JPEG2000 Longplay MXF File - 3840x2160, ST2084(PQ), BT.2020, RGB, 12bit Textless Backgrounds at Tail Conformed DoVi Metadata XML (sidecar) TRT: Total Data: Post Facility/Date:

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UHD/SDR SPECIFICATIONS:	
* Delivery on LTO7 (LTFS format) required. Upon Request file can be delivered directly to the Lionsgate QC vendor via Aspera. Once the file is QC approved, Lionsgate will archive to LTO as distribution expense. * File naming convention: Title_Feat_UHD_SDR_ProResXQ_3840x2160_Aspect Ratio_txtle-tl-ENG20_ME_ENG51_[DATE].mov	
SDR/REC709	• If program was mastered in Dolby Vision, then all SDR elements should be derived from the 100nit trim pass of the Dolby Vision Metadata • If a discrete Rec709 color grade is completed, then it must match (as closely as possible) the 100 nit trim pass of any Dolby Vision element delivered.
MASTER REQUIRMENTS	• One (1) Original Aspect Ratio Master (2.40, 2.39, 2.35, 2.00, and 1.85) • One (1) 16X9 (1:78) Full Frame (Pan & Scan) • Note: If 1.78 is the Original Aspect Ratio than the 1.78 master is the only master required.
FILE/HEAD FORMAT:	• Black (1 frame) • Slate (10 seconds) • Black (60 seconds) • First frame of program (01:00:00:00) • Black (60 seconds) • Textless Material • Black (1 frame)
VIDEO FILE FORMAT:	• ProRes XQ 4444
RESOLUTION:	• UHD: 3840x2160
FRAME RATE:	• 23.98
VIDEO LEVELS:	• White level luminance should not exceed 100IRE/700mV when set to reference color bars. • Black levels (setup) should not go below 0IRE/0mV when set to reference color bars.

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AUDIO:	
* Levels must be measured at True Peak * +20dbvu (0dbFS)	• Channel 1: Stereo LT or Stereo LO • Channel 2: Stereo RT or Stereo RO • Channel 3: M&E Left • Channel 4: M&E Right • Channel 5: 5.1 Left • Channel 6: 5.1 Right • Channel 7: 5.1 Center • Channel 8: 5.1 LFE • Channel 9: 5.1 Left Surround • Channel 10: 5.1 Right Surround
TEXTLESS:	• Delivered at tail of program. • Can be delivered as separate file upon request. • There should be 2 seconds of black between each section, with timecode corresponding to the texted sections
LTO LABEL INFORMATION: *Be sure to label both tape and case	FULL TITLE UHD/SDR Servicing Masters -ProRes XQ 4444_3840x2160_16X9 OAR Letterbox - Audio Configuration Listed - ProRes XQ 4444_3840x2160_16X9 1.78 Full Frame - Audio Configuration Listed Textless Backgrounds at the Tail TRT: Total Data: Post Facility: Date: