

3. PHOTO LABORATORY PROCEDURES

3.01 General:

All film and materials to be processed will be in accordance with the film manufacturer's recommended procedures for processing and developing. The film shall be handled as little as possible and as carefully as possible when laboratory processes are required. The Contractor is expressly forbidden to utilize this film for the production of any products not specified in these Specifications or in the contract with the County.

3.02 Image Quality:

Images on the aerial negatives shall be clear and sharp in detail and free from light streaks, static marks, scratches, and other blemishes. Special care shall be exercised to insure proper developing and thorough fixing and washing of all film. The development, fixing, washing, and drying of all exposed photographic film shall result in a quality image with optimal contrast, tone, balance, resolution, uniformity in range density, and fine grain quality. All film processing must be performed in a state-of-the-art processor. The imagery of the film shall be clear and sharp and evenly exposed across the format. Special care should be exercised to prevent distorting the film during processing or drying. Film shall be exposed and processed with a target density range of 1.0 ± 0.2 as measured in the neat image areas of each roll of film. Minimum density should not be less than 0.3 and the maximum density should not be greater than 1.5 as measured with a densitometer with a scale range of 0 to 3.0. Color film will be processed in accordance with the film manufacturer's recommendations; the color balance will be such that the highest level of detail will be maintained throughout the full extent of the color spectrum. All fiducial mark images shall be clear and sharp.

3.03 Film Labeling:

Each exposure shall be clearly labeled by mechanical means in ink, or foil transfer if using a film titler, at the edge of the negative just inside the image area on the north edge for north-south flights or the west edge for east-west flights; no thermal processes shall be used. This labeling shall be at least 0.14 inches in height and shall include the following information as a minimum:

Date of Scale of
Photography Photography County Name Flight Strip Exposure No.

The "Scale of Photography" shall be given in inches and feet, e.g., 1" = 600', etc. "Flight Strip" numbers are not to be repeated anywhere within the photographic coverage of the contract, but will be numbered consecutively starting with Strip No. 1 and continued sequentially over all flight lines and scales. "Exposure Numbers" for any flight strip will be numbered consecutively from "Exposure No. 1" and continued to the end of that flight line. On north to south flight lines, exposure numbers will begin at the north end of the flight line, and on east to west flight lines, exposure numbers will begin on the east end of the flight line.

3.04 Photo Center Index:

Coordinates derived from the ABGPS and/or FAAT will be used to produce a photo center index showing the locations of all photo centers. The photo center index will be in a format that can be used on the County's GIS system or in an acceptable standard data exchange format. Each photo center shall be annotated with the x and y coordinate of its photo center point (nadir) and with its flight strip and exposure number. Each photo center index shall also include the following title information: name of the County, name of the Contractor, date (month and year) and scale of aerial photography, type of camera and the focal length of its lens, the scale of the photo index, and a north arrow. In the event two or more photo indexes are required for the County at any one scale, a diagram showing the relationship of one photo index to the others will be drawn in each photo index's margin. Photo indexes shall be oriented to the north, and the title information should appear in the south or east margin of each index. All re-flights of aerial photography will be indexed. A paper plot of the photo center index as well as the photo center index digital file shall be delivered to the County.

3.05 Contact Prints of Aerial Photography:

If contact prints are produced as a part of the project, the contact prints of the original aerial negatives shall be prepared on double-weight, semi-matte paper or equivalent weight resin-coated paper. All prints will be clear and free from chemicals, stains, blemishes, fog, streaks, or any defects that would render them unusable. Processing, including exposure, development, fixation, washing, and

drying of all photographic materials, shall result in finished photographic prints having a fine grain quality, a normal, uniform density, and such tone and contrast that all photographic details shall show clearly within the dark and light tone areas as well as in areas with intermediate tones. All prints shall show camera fiducial marks. Contact prints shall be prepared for the County only if requested by the Contracting Officer in writing.