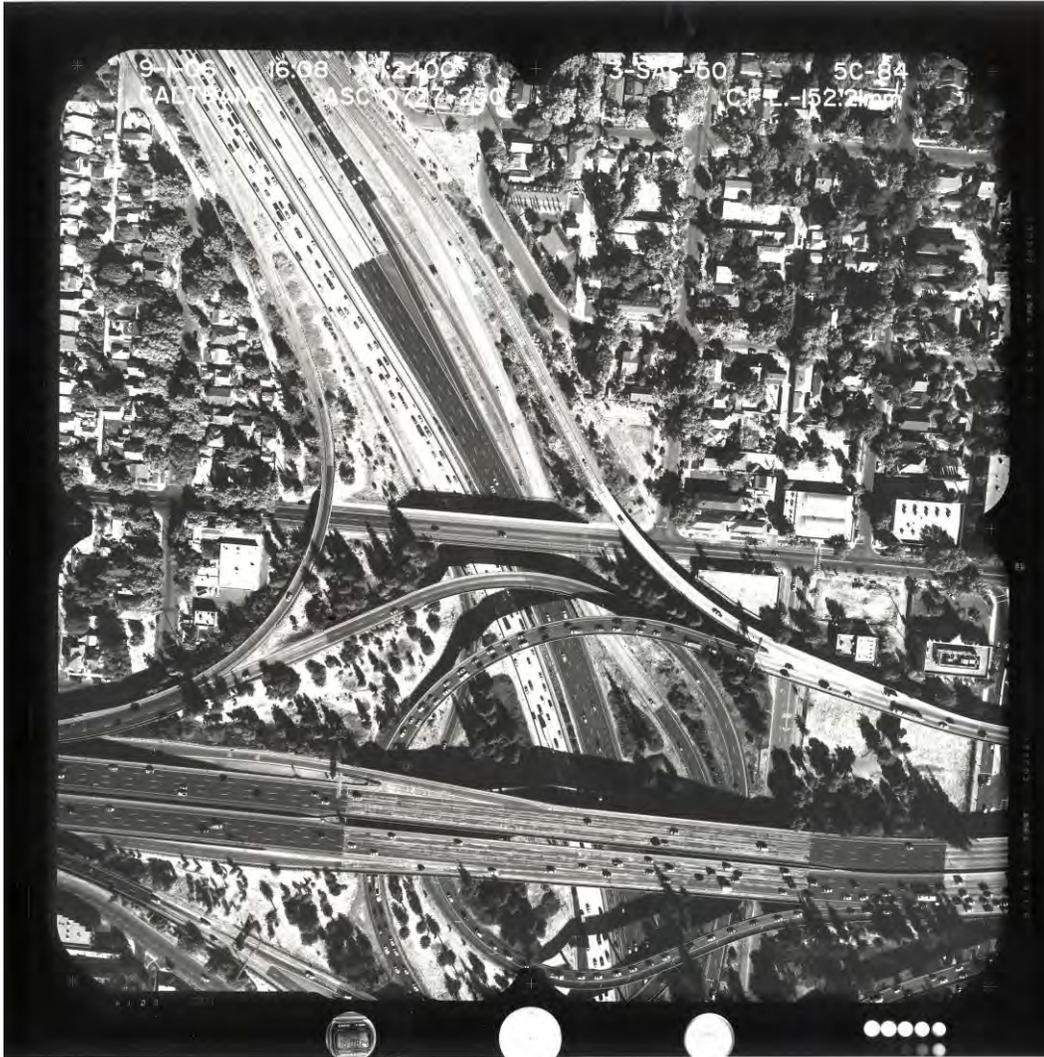


AERIAL PHOTO EDITING GUIDE



OFFICE OF PHOTOGRAMMETRY
DIVISION OF ENGINEERING SERVICES
DEPARTMENT OF TRANSPORTATION
STATE OF CALIFORNIA

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A. DATA STRIP & NEGATIVE FILM EDITING

Aerial Photography provided to the State, will be required to have three separate areas of data information on the 10" x 10" (Image area is 9" x 9") photograph.

1. Manufacture's data strip on the film negative from the manufacture: generally runs along the left edge of the photograph, outside of the image area. This information contains the name of the manufacturer, an internal counter, and a control number. This information is placed permanently on the film, at the time of manufacturing and cannot be edited. (See Page 10)
2. Instrument data strip on the film negative from the flying contractor at the time of the flight through the aerial camera. This information will be located generally at the top of the photograph, outside of the image area, and mostly in the direction of the flight. The flying contractor will be required to show, all eight fiducials, an exposure number, camera identification and serial number, date of flight, time of flight, contractor's name, and focal length of the lens. (See Page 10)
3. Annotation data strips on the film negative done after the flight: (conforming to Caltrans standards) the edits on the photograph will identify the beginning and ending of the flight line, as well as the intermediate photographs between the beginning and ending exposures. The following information will be shown on the negatives. (See Page 10)

The first photograph, depicting the beginning of the flight line will show two annotation data strips. One of the data strips will be across the top of the negative, and the other will be along the bottom of the negative within the image area. The information to be shown along the top will be:

Date of Photo, Time, Scale, Dist-Co-Rte, Roll and Exposure Number

The information along the bottom of the photo will be:

CALTRANS, ASC Number, and Calibrated Camera Focal length

The middle photographs will be annotated along the top of the photos as shown:

Date of Photo, Time, Scale, Dist-Co-Rte, Roll and Exposure Number

There will not be any edits on the bottom of these exposures.

The last photograph in the flight line will be edited with two lines of edits, along the top of the photograph as shown:

Date of Photo, Time, Scale, Dist-Co-Rte, Roll and Exposure Number

CALTRANS, ASC Number, Camera Focal Length

There will be no edits on the bottom of this last photograph in the flight line.

Please see examples on Pages 6, 7, 8 and 10. Under no circumstances, will the fiducials be covered by these edits.

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B. DIRECTION OF EDITS

The editing annotation will be in the same direction as the State Routes Post Mile Listing. The true direction will be provided to the contractor, and shown on the original order letter. A second visual method will also be shown on the prepared flight plan, with the word “Edits” and direction clearly shown. It is the contractor’s responsibility to confirm that the edits are correct, and in the proper direction.

C. LETTERING – Size and Style

The annotations along the negative will be in the font style of Arial, (or Block Leroy) and shall have a size of “3/16”. In order to ensure the success of the contractor, Caltrans will accept delivery of the proof prints to be hand edited with a grease pencil. Any necessary corrections could be made at this time, prior to final editing of the negative.

D. ANNOTATION OF CROSSING STATE ROUTES

Under certain circumstances, an aerial flight line will cross over one or more State Routes that are not part of this order letter. When those circumstances arise, the contractor will be notified by the order letter to edit all negatives that show the crossing State Route, with both State Route Designations. The edits will show the main route number first, and the secondary route second. If two or more routes cross within the same exposure, then all three routes will show on the negatives, with the main route first, followed by the lowest route number, then the highest route number. Example:

Single Route	7-LA-710 (Page 5)
Two Routes	7-LA-710/10 (Page 5), 7-LA-5/210 (Page 7)
Three Routes	7-LA-5/10/60 (Page 6)

Please see the examples on Pages 5, 6 & 7.

E. APPENDIX

Example 1: Annotation Sample of Two State Routes.

Example 2: Photo Editing for Beginning of Flight Line.

Example 3: Photo Editing for End of Flight Line and Single Photo

Example 4: Photo Editing for Exposures in the middle of Flight Line

Example 5: Annotation of Photo Identification with Multiple Routes

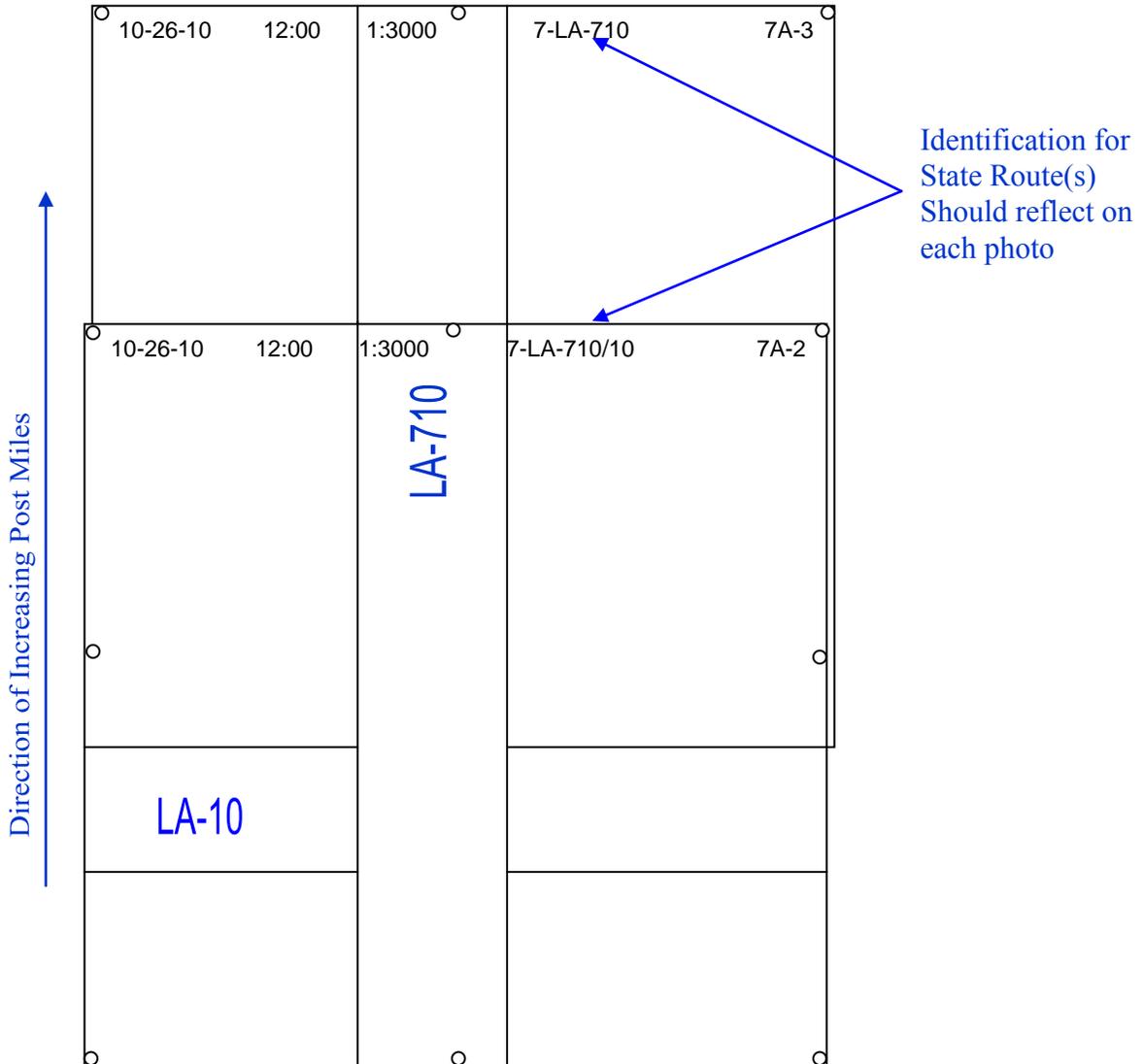
Example 6: Aerial Photo Sample

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Example 1: ANNOTATION SAMPLE OF TWO STATE ROUTES

Annotation on the film negative and edited print should show all the state routes if there are multiple state routes on the exposure. Show main route or route along the flight line first and then other route(s).



Example of Identification on the Film Negative

Identification for route should annotate route number along the direction of flight line first and other route(s) number(s).

○ ← Fiducial Mark

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Example 2: PHOTO EDITING FOR BEGINNING OF FLIGHT LINE

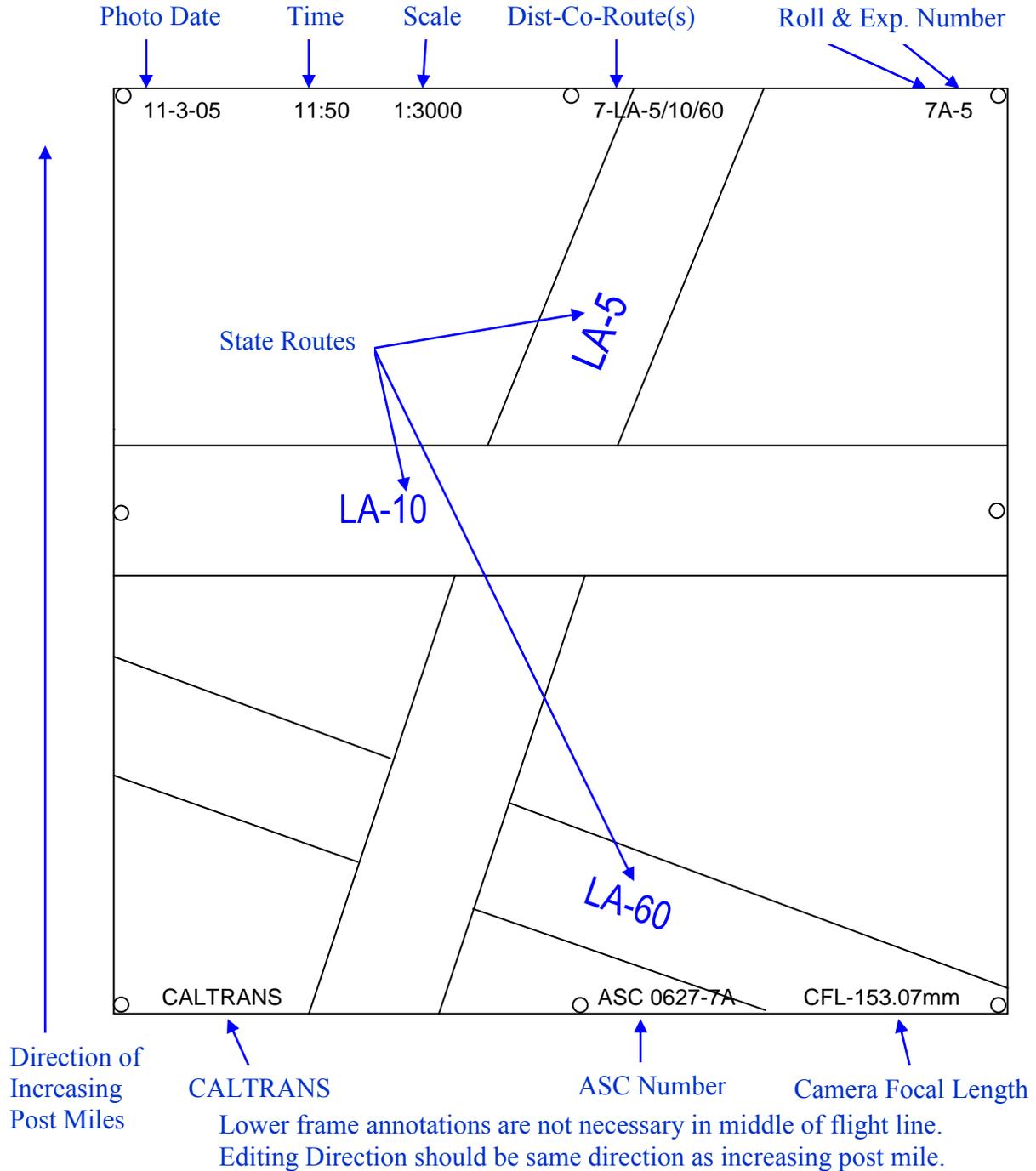


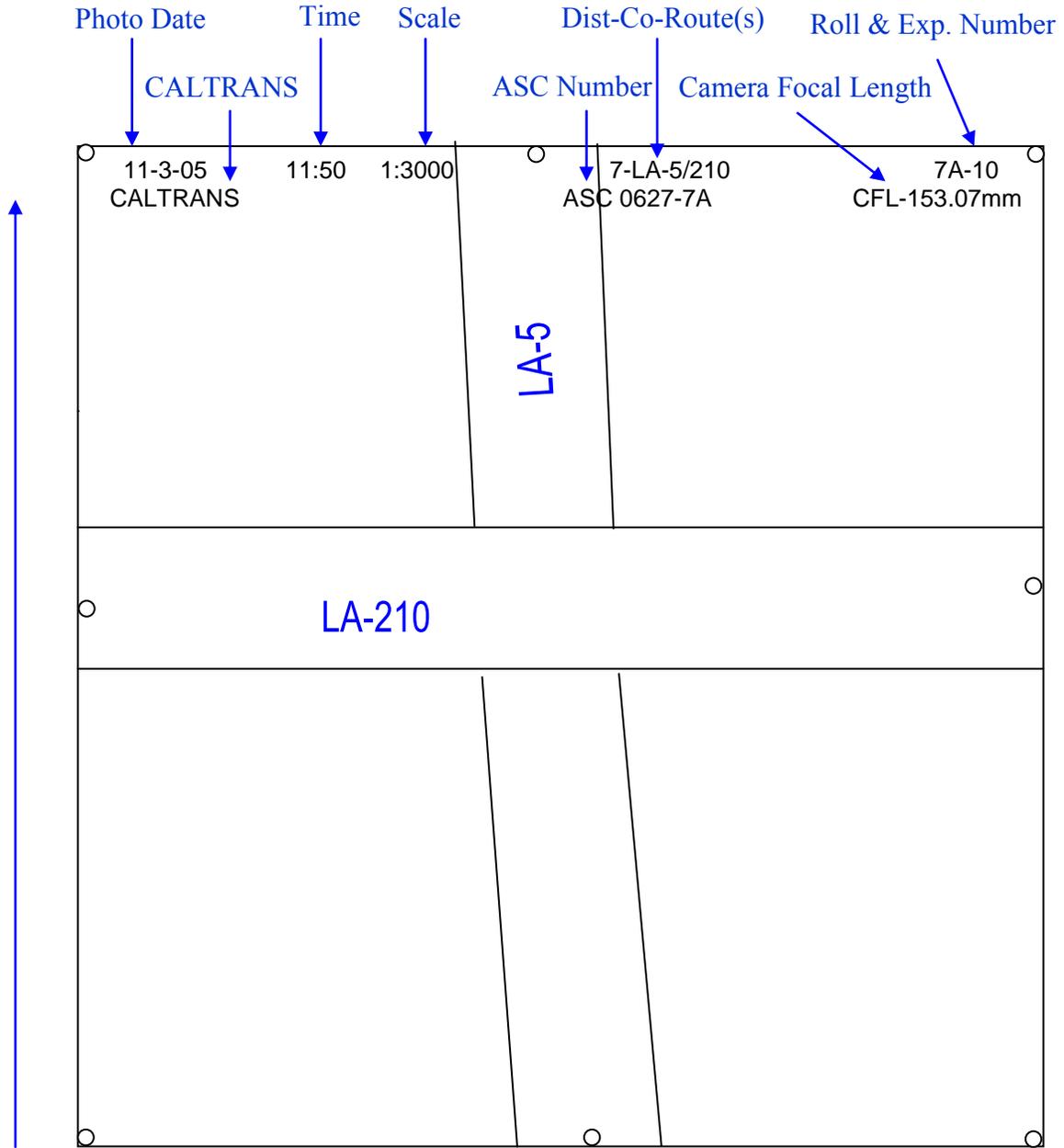
Photo Identification for State Route: main route or flight direction of the State Route first and other routes accordingly, lower number to higher number, in this case 7-LA-5/10/60.

○ ← Fiducial Mark

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Example 3: PHOTO EDITING FOR END OF FLIGHT LINE & SINGLE PHOTO



Direction of
Increasing
Post Miles

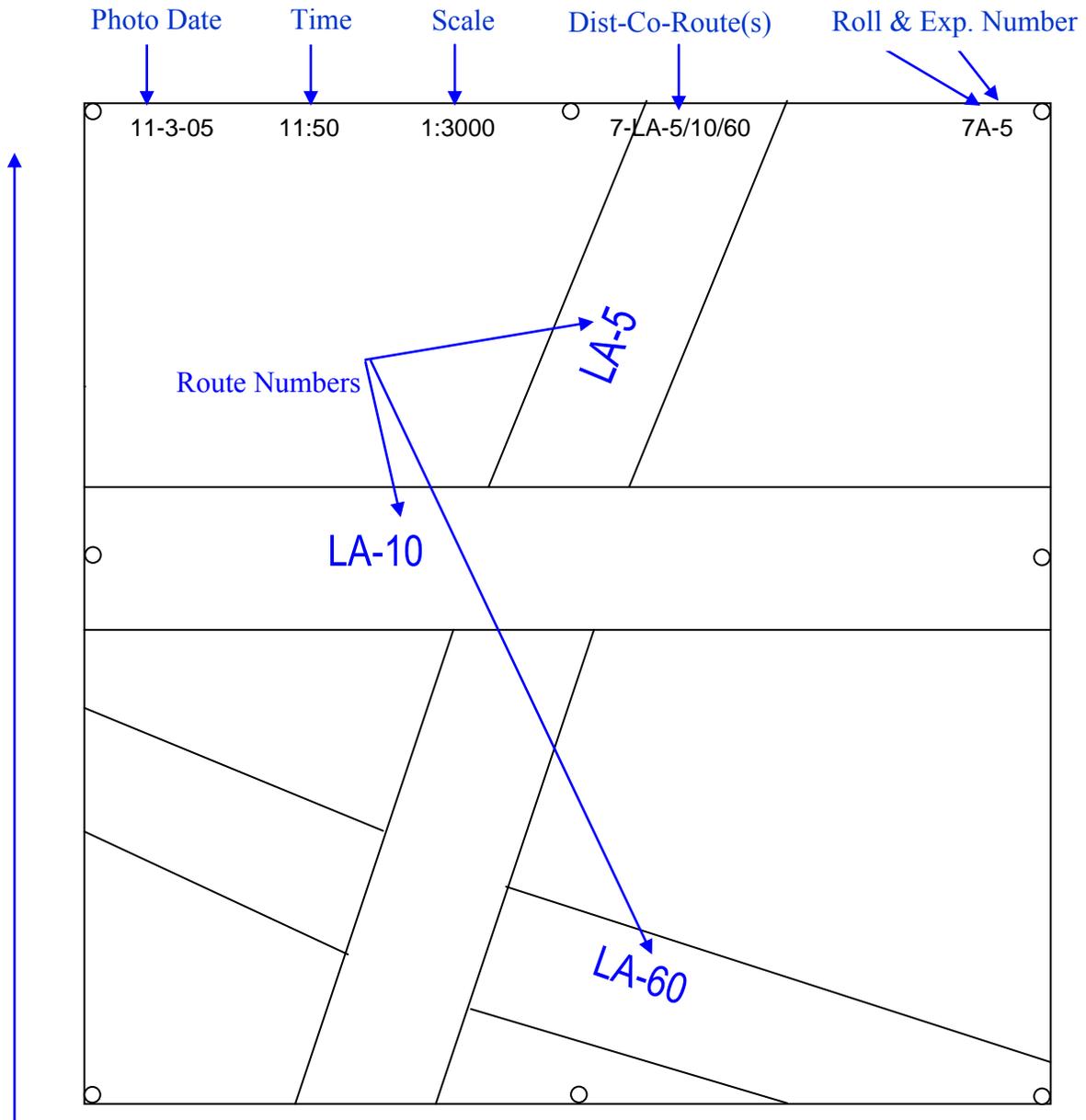
Editing Direction should be same direction as increasing post mile.

○ ← Fiducial Mark

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APPENDIX

Example 4: PHOTO EDITING FOR EXPOSURES IN THE MIDDLE OF FLIGHT LINE



Direction of Increasing Post Miles

Editing Direction should be the same direction as increasing post mile. Annotation on bottom of film is not necessary in middle of flight line.

Photo Identification for State Route: main route or flight direction of the state route first and other routes accordingly, lower number to higher number, in this case 7-LA-5/10/60.

○ ← Fiducial Mark

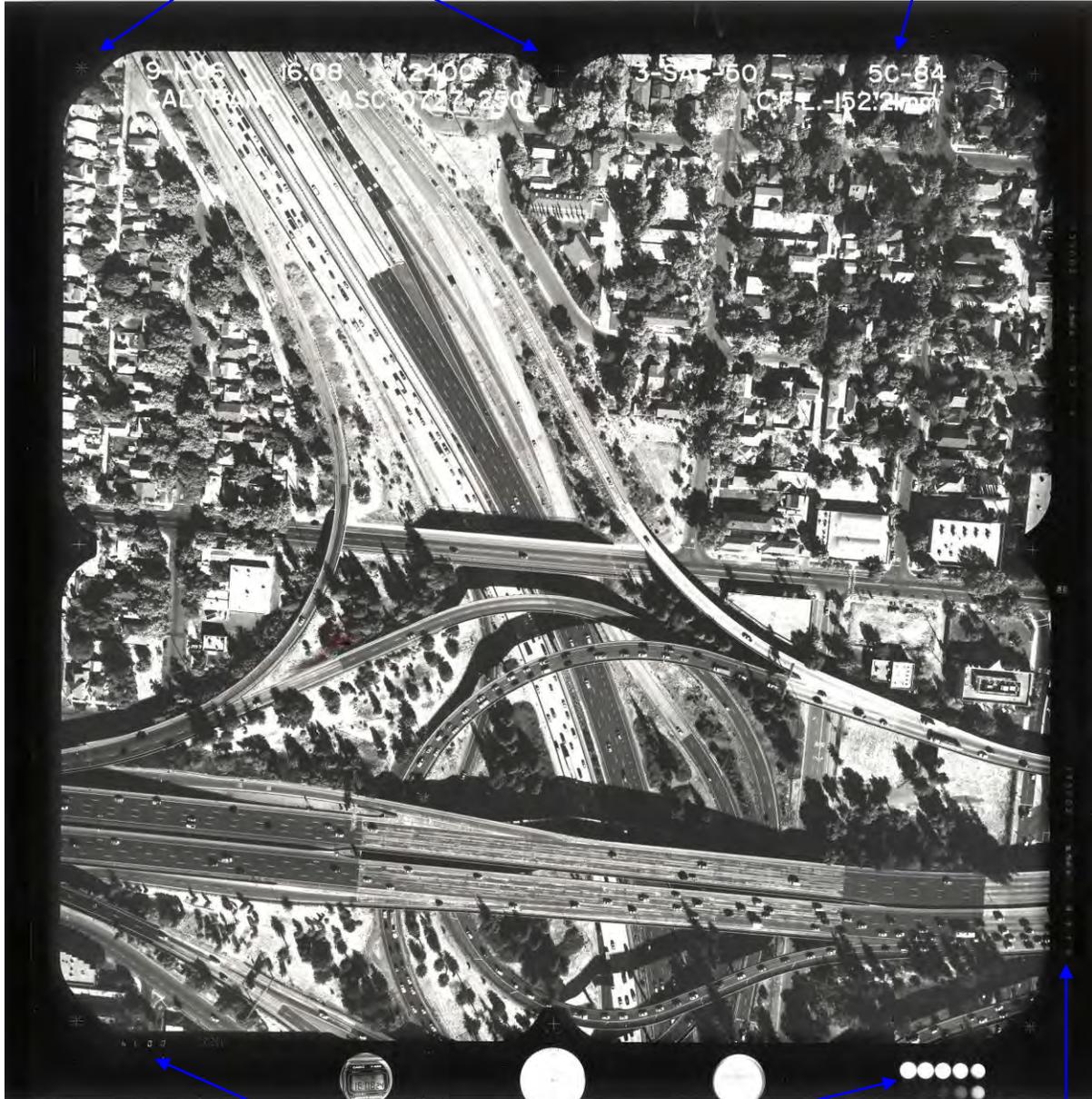
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APPENDIX

Example 6: AERIAL PHOTO SAMPLE

Fiducial Marks: Should have eight fiducial marks and should not be covered by editing.

Editing Data Strips: Editing should be done according to Caltrans' standard specifications.



Instrument Data Strip:
Flying contractor's data strip and
instrument information

Manufacture Data Strip:
Material data strip from
manufacture.

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F. CALTRANS' AERIAL PHOTO CHECK LIST

Flying ASC _____ DIST _____ CO _____ ROUTE _____ PM: _____

Mapping ASC _____ UNIT: _____ EA: _____ SD: _____

Proof Print _____ Edit Print _____ Precision: Yes _____ No _____

	Acceptable	Unacceptable	Remark
ANNOTATIONS (Editing on the Edited Print)			
ASC number	<input type="checkbox"/>	<input type="checkbox"/>	_____
Photo Date	<input type="checkbox"/>	<input type="checkbox"/>	_____
Time	<input type="checkbox"/>	<input type="checkbox"/>	_____
Scale	<input type="checkbox"/>	<input type="checkbox"/>	_____
Dist-CO-Route	<input type="checkbox"/>	<input type="checkbox"/>	_____
Roll Number	<input type="checkbox"/>	<input type="checkbox"/>	_____
Exposure Number	<input type="checkbox"/>	<input type="checkbox"/>	_____
CALTRANS	<input type="checkbox"/>	<input type="checkbox"/>	_____
ASC Number	<input type="checkbox"/>	<input type="checkbox"/>	_____
Camera Focal Length (CFL)	<input type="checkbox"/>	<input type="checkbox"/>	_____

BASIC ELEMENT FOR PHOTOGRAMMETRY (Initial Visual Check Up)

Over Lap	<input type="checkbox"/>	<input type="checkbox"/>	_____
Coverage	<input type="checkbox"/>	<input type="checkbox"/>	_____
Image Motion	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fiducial Mark	<input type="checkbox"/>	<input type="checkbox"/>	_____
KAPPA	<input type="checkbox"/>	<input type="checkbox"/>	_____
PHI	<input type="checkbox"/>	<input type="checkbox"/>	_____
OMEGA	<input type="checkbox"/>	<input type="checkbox"/>	_____
Flying Height (Photo Scale)	<input type="checkbox"/>	<input type="checkbox"/>	_____
Control Mark	<input type="checkbox"/>	<input type="checkbox"/>	_____
Flight Line(s)	<input type="checkbox"/>	<input type="checkbox"/>	_____

EDITING & PHOTO QUALITY

Lettering-Size, Style, Weight	<input type="checkbox"/>	<input type="checkbox"/>	_____
State Route Number	<input type="checkbox"/>	<input type="checkbox"/>	_____
Editing & Flight Direction	<input type="checkbox"/>	<input type="checkbox"/>	_____
Contrast and Darkness	<input type="checkbox"/>	<input type="checkbox"/>	_____

MATERIAL QUALITY

Photo Size (Cutting)	<input type="checkbox"/>	<input type="checkbox"/>	_____
Paper Quality - Thickness	<input type="checkbox"/>	<input type="checkbox"/>	_____
Negative Quality - Thickness	<input type="checkbox"/>	<input type="checkbox"/>	_____

REMARKS _____

*If District checks, please cc to OoP, DES

Checked by _____

Cc: District- _____

OoP, DES,

Cc: File: _____

or DPC Personal