



SPECIFICATION WORDING RECOMMENDATIONS

VOLUME 4; revision B

**DELIVERY OF CONSTRUCTION PHOTOGRAPHS
IN DIGITAL FORM, plus
SEARCHABLE CD-ROM ARCHIVING
OF CONSTRUCTION PHOTO DIGITAL FILES**

***P-Tn RouteSCANS / P-Tn ProgressSCANS / P-Tn WebGALLERY
P-Tn Searchable CD-ROM Archive***

The following terms (as written) are slogans / pending trademarks of *P-Tn, Inc.*
'Visual Documentation' photo -- digital -- video
and these should not be included in your specification wording, unless followed by "or approved equal"
ProgressPHOTOS ProgressSCANS RoutePHOTOS RouteSCANS VideoRECORDS
ProgressCAM WebWINDOW ProgressCAMPics ProgressCAMovie
PhotoWALKTHRU WebGALLERY



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**VOLUME****4****DESCRIPTION****DELIVERY OF CONSTRUCTION PHOTOGRAPHS IN DIGITAL FORM, plus SEARCHABLE CD-ROM ARCHIVING of CONSTR. PHOTO DIGITAL FILES**

By converting images to a digital format, you dramatically increase their usefulness. Our ***P-Tn RouteSCAN*** and ***P-Tn ProgressSCAN*** digital image files are stored in desktop computers, carried to meetings via a laptop computer, included as exhibits in letters and reports, printed from computer printers, emailed around the world, or posted to ***P-Tn WebGALLERY*** internet websites. Digital or electronic delivery of construction progress photos is most often approached through original capture on digital camera equipment; this approach is subject to many pitfalls relating to cameras, lenses, memory capabilities, pixel quality and quantity, file format, compression, and post-capture file management. In view of these issues ... digital files may not have the legal integrity that an original film negative does ... a downfall that can be effectively resolved through the use of quality scans made directly from the original professional film negatives, or photographic prints. This approach yields a controlled resolution digital file, while still preserving the original color negatives, as proof against image manipulation, and for making high(er) resolution scans, or enlargements.

After completion of an engineering or building project, all photographs can be transferred to a digital format and [literally hundreds of pictures] permanently stored on a CD-ROM archive, prepared with a search capability that will permit retrieval of desired images, along with the descriptive information which is embedded in the digital image file. All the '*Visual Documentation*' images for a project can be consolidated onto a single ***P-Tn Searchable CD-ROM Archive***, with the ability to computer-print the photographs you select for retrieval.



The following is our recommended specification wording for:

P-Tn ProgressSCAN & RouteSCAN Digital Files
P-Tn WebGALLERY / P-Tn Searchable CD-ROM Archive

‘DELIVERY OF CONSTRUCTION PHOTOGRAPHS IN DIGITAL FORM’ plus
‘SEARCHABLE CD-ROM ARCHIVING of CONSTRUCTION PHOTO DIGITAL FILES’

‘DELIVERY OF CONSTRUCTION PHOTOGRAPHS IN DIGITAL FORM’

TRADITIONAL OR DIGITAL CAPTURE

Construction photographs shall be provided in the form of [***P-Tn ProgressSCAN or P-Tn RouteSCAN***] digital files, in addition to the color photographic prints. Digital files are NOT to be created using digital camera equipment. These digital files may be created either from scans of the original negatives, or scans from conventional color prints of at least 5x7 inch dimensions. These images are to be uncompressed JPEG format files, and must be of sufficient size and quality that they will open to dimensions which exceed 20x30 inches, at a minimum of 72 dpi resolution, (i.e., 1500 x 2200 pixels; minimum).

ALTERNATE REQUIREMENT – Digital images may be created using original digital photographic equipment. Digital camera capabilities must have a sensor capacity of at least 6 megapixels, should be capable of utilizing a moderate wide-angle lens system, and electronic flash capable of properly illuminating large interior spaces. The digital camera must produce original uncompressed JPEG format image files that open to display at dimensions which exceed 20x30 inches, at a minimum of 72 dpi resolution, (i.e., 1500 x 2200 pixels; minimum), OR raw format images which can be computer-processed to these specifications in either JPEG or TIF format.

All digital image files shall be previewed for color accuracy on a calibrated computer monitor. Digital file images are not to be computer manipulated in any manner which alters the visual information in the original photograph, except for fundamental color and/or density (brightness) corrections required for proper printing or writing to CD-ROM.

RECORDING DESCRIPTIVE INFORMATION FOR EACH PHOTOGRAPH

All descriptive project information recorded by the photographer at the time of the original photograph shall be imbedded in the digital file, incorporated with the image in such a way that this information will always appear when the file is opened for viewing, and so that it cannot readily be separated or deleted from the digital file. When viewed or printed, both the photographic image and descriptive information

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shall appear together. Descriptive information must be clear and legible when presented with the image file on a computer screen, and shall be positioned so as not to obscure important parts of the photographic image. To preserve copyright protection, the photographer's name shall be included in the digital file. A unique and individual digital file name or number shall appear with this descriptive information, along with the respective negative number from the original film; the digital file and all prints shall bear matching identification numbers, to facilitate cross-referencing of negatives to their respective printed digital files, and electronic files in computer storage, or on CD-ROM archives.

DIGITAL FILE NAMING CONVENTION

Digital files shall be saved in JPEG (.jpg) format, with minimum (NO) compression applied. Saved files should range in size (average) from 1.5 to 2.0 megabytes per file, unless a smaller minimum size is requested. Each file shall be assigned a unique file name [not to exceed eight (8) characters, if possible], created by using the date of the original photography [yyymmdd format] followed by a two-character alpha-numeric designation for the respective view(s) photographed on that date.

PROOF SHEET

A proof sheet containing all digital image files from a given photography date shall be created; images shall be presented large enough in size to be recognizable (about the size of an original 35mm negative), and the individual file name shall appear adjacent to each respective image. [ALTERNATE REQUIREMENT -- images shall be presented large enough in size that the descriptive information imbedded in the image is legible without magnification (six images per proof sheet; each image 2-1/4 x 3-1/4 inches; the embedded text must be legible), and the individual file name shall appear adjacent to each respective image.] These contact proof sheets shall be sized to 8-1/2x11 inches or less, for computer print-out, without the need for re-sizing or adjustments. Contact proof sheets shall be included, in JPEG digital format, on the respective CD-ROM where the digital file images are stored. Each CD-ROM shall bear a surface label which includes the professional photographer's name and contact information, name of the project, and description of the contents.

COLOR PRINTS

NOTE: **P-Tn** recommends having at least *ONE print made from each digital file, so you have a hard-copy to support your electronic file. Building and structural projects are typically printed in 8x10 size, while most pipeline / street route photography is printed in smaller, more economical, 5x7 or 4x6 sizes. *Order additional sets of prints or CD-ROMS, as needed, for contractor, engineer, architect, owner, investors, etc...

Color photographic prints shall be made from the digital JPEG image files. The image shall be printed to ten inches in length, on RC-coated photographic-style paper, through either a conventional photographic printing process or a computer-based printing system (employing photo-quality, color corrected, 720 dpi resolution printing, using (minimum) 25-year quality pigments). Prints shall be protected in archival-quality polypropylene album pages, and bound into labeled, standard-sized, three-ring binders. Additional binders shall be provided, as needed, to hold all progress photographs taken throughout construction.

[ALTERNATE REQUIREMENT -- If conventional prints are made directly from the original negatives, each must bear an adhesive label which includes the project, date of exposure, complete description of the view photographed, name of contractor or architect / engineer, and other pertinent information; prints shall also be permanently marked with the photographer's name and/or trademark.]

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ALTERNATE REQUIREMENT FOR NO PRINTS [Contact PROOF sheets only] -- No individual prints shall be required. Color contact sheets shall be created, displaying six of the digital image files per page [each image must measure at least 2-1/4 x 3-1/4 inches, and the embedded text must be legible. All Contact sheets shall be sleeved in archival-quality protective pages, and bound into labeled three-ring binders, along with copies of the field-logs; digital copies of the contact sheets (JPEG format) and field logs (PDF format) shall be included on the CD-ROM with the JPEG image files. Each CD-ROM shall bear a surface label which includes the professional photographer's name and contact information, name of the project, and description of the contents.

IDENTIFICATION OF NEGATIVES

If they are NOT to be stored by the photographer ... The original negatives shall be protected in professional film sleeves and identified using a numbering system which matches each group and individual negative to the digital image files created from them. Included with each group of negatives shall be a copy of the contact proof sheet, providing an immediate visual match for cross-referencing negatives to prints.

DELIVERY OF DIGITAL IMAGES

All digital files shall be delivered on a Hybrid or PC-formatted CD-ROM and shall be included in the package with the color photographic prints. Photographs and electronic files must be delivered to the contractor at a pre-established date that will be designated by the engineer / owner. The individual digital files shall be stored electronically by the photographer until completion of the project; replacement digital files shall be made available, if required, at prevailing costs for preparation and delivery.

OPTIONAL REQUIREMENT -- Digital files [***P-Tn ProgressSCANS or P-Tn RouteSCANS***] shall be delivered via email to a maximum of ten (10) project participants, whose email addresses shall be provided to the photographer at the commencement of construction. Emailing of files shall be completed no later than twenty-four hours after the conventional color prints are shipped.

OPTIONAL REQUIREMENT -- Digital files [***P-Tn ProgressSCANS or P-Tn RouteSCANS***] shall be posted to an unpublished internet web page, and notification shall be sent via email to a maximum of ten (10) project participants, whose email addresses shall be provided to the photographer at the commencement of construction. Web posting and email notification shall be completed no later than twenty-four hours after the conventional color prints are shipped.

'SEARCHABLE CD-ROM ARCHIVING OF CONSTRUCTION PHOTO DIGITAL FILES'

OPTIONAL REQUIREMENT -- Within 30 days after final completion of the project, all digital construction photo image files shall be written to a single CD-ROM Disc (***a P-Tn Searchable CD-ROM Archive***), in order to create a 'permanent' archive of these images. This archive must be produced using Extensis Portfolio software. Each CD shall contain all of the JPEG (.jpg) formatted digital files, which include both the photographic image and embedded descriptive information, identified by date-coded alpha-numeric filename - the same file names as those delivered periodically during construction of the project. The hybrid or PC-formatted CD-ROM shall be made searchable using keywords selected

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by the owner and/or architect / engineer; a maximum of ten keywords per CD-ROM Archive shall be encoded to each image stored on that CD, and must include the month, day, and year of photography for each image, the individual image file name, plus three-to-five additional keywords which will further describe the image-files. Two identical [Extensis Portfolio Software created] searchable CD-ROM archives shall be provided in labeled jewel cases. Each CD-ROM shall bear a surface label which includes the professional photographer's name and contact information, name of the project, and description of the contents.

SEE VOLUME 1 and VOLUME 1SV – SHORT VERSION; for information regarding;
'PRE-CONSTRUCTION AND POST-CONSTRUCTION ROUTE PHOTOGRAPHY'

SEE VOLUME 3 and VOLUME 3SV – SHORT VERSION; for information regarding;
'BUILDING CONSTRUCTION PROGRESS PHOTOS'
'AIRCRAFT [FIXED-WING OR HELICOPTER] AERIAL PROGRESS PHOTOGRAPHY'
'LOW-LEVEL / GROUND-BASED AERIAL PHOTOGRAPHY'
'PLUS FINAL ARCHITECTURAL PHOTOGRAPHY'

SEE VOLUME 5 for information regarding;
'PRIORITY-SCHEDULED DELIVERY OF CONSTRUCTION PHOTOGRAPHS VIA THE INTERNET'



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OUR COMPLETE
SPECIFICATION WORDING LIBRARY
IS AVAILABLE ONLINE AT
www.P-Tn.com

VOLUME 1 - PHOTO DOCUMENTATION OF SURFACE CONDITIONS FOR STREET AND PIPELINE PROJECTS

P-Tn RoutePHOTOS

P-Tn RouteSCANS

VOLUME 1SV – SHORT VERSION of VOLUME 1

VOLUME 2 - AUDIO-VIDEO TAPE RECORDINGS OF PROJECT SITE SURFACE CONDITIONS --- a SHORT VERSION is available.

P-Tn VideoRECORDS

VOLUME 2SV – SHORT VERSION of VOLUME 2

VOLUME 3 - BUILDING CONSTRUCTION PROGRESS PHOTOS --- a SHORT VERSION is available.
AIRCRAFT OR LOW-LEVEL / GROUND-BASED AERIAL PROGRESS PHOTOGRAPHY
plus FINAL ARCHITECTURAL PHOTOGRAPHY

P-Tn ProgressPHOTOS

P-Tn Aerial Progress Photography

P-Tn TetherBLIMP Aerial Progress Photography

VOLUME 3SV – SHORT VERSION of VOLUME 3

VOLUME 4 - DELIVERY OF CONSTRUCTION PHOTOGRAPHS IN DIGITAL FORM
plus SEARCHABLE CD-ROM ARCHIVING OF CONSTRUCTION PHOTO DIGITAL FILES

P-Tn ProgressSCANS

P-Tn RouteSCANS

P-Tn Searchable CD-ROM Archive

VOLUME 5 - PRIORITY-SCHEDULED DELIVERY OF CONSTRUCTION PHOTOGRAPHS VIA THE INTERNET

P-Tn PhotoWALKTHRU

P-Tn WebGALLERY

VOLUME 6 - ON-SITE 'LIVE' INTERNET DIGITAL IMAGE CAPTURE, FOR IMMEDIATE DELIVERY TO INTERNET WEBSITES

P-Tn ProgressCAM

P-Tn ProgressCAMpics

P-Tn WebWINDOW

P-Tn ProgressCAMovie