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Federal Bureau of Investigation

152997

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152997

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FUNDAMENTAL PRINCIPLES AND THEORY OF
CRIME SCENE PHOTOGRAPHY

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PROLOGUE

Every difficult endeavor requires the integration of two important areas so that success can be obtained - theory and actual practice. There is almost always a tendency to disregard the theoretical aspects associated with a specific problem so that the practical considerations can be studied. Without a sound framework relating to the significant theory background of any problem it is virtually impossible to insure that the final product is the best possible one which could be obtained under a given set of circumstances.

The following material is intended to serve as a basis for study of the theory and fundamental principles associated with crime scene photography. Here the attention is directed not to the technological components of this area, but to the basic requirements necessary to integrate photography as an effective aid to investigation and prosecution. It is the responsibility of the individual who photographs crime scenes to acquire a foundation of knowledge which can be used to explore the "who, what, when and where" of the situation before attacking the difficulties involved in photographing an actual crime scene.

FUNDAMENTAL PRINCIPLES AND THEORY OF CRIME SCENE PHOTOGRAPHY

The law enforcement community must constantly review its mission to determine the appropriate use of the photographic medium. This review necessarily demands that a variety of possible areas be explored, inasmuch as photographic duties and goals will differ in given instances.

An extremely important application of photography in law enforcement involves the pictorial documentation of crime scene locations. Because a complete visual recordation of the scene is needed to insure a thorough investigation and subsequent prosecution, there are theoretical, legal and technical problems which are to be studied prior to the on-site photography. It is to be implicitly stated that a series of poorly planned, poorly executed and poorly displayed photographs have the potential to directly affect the success of other efforts of the crime scene investigation. Therefore, crime scene photography is one of the major integral facets of the entire investigation process.

Before a systematic depiction of the scene can be made with photography, the purpose and basic initial rules are to be discussed as background for a comprehensive approach. The obvious purpose of crime scene photography is to set forth a visual record of the crime scene and all its pertinent features. However, the best exemplification of the role of photography can

be stated as the presentation of a logical "story" as told by the scene in visual form. In keeping with this goal, the first idea to be considered is that the scene must be undisturbed, to the extent reasonably possible, prior to the taking of photographs. This situation will assist in the establishment that the conditions as portrayed in the pictures truly illustrate the original and uncontaminated features of the scene. Also, numerous photographs should be taken with the idea that the cost of film does not override the immense value of completeness. Whenever there is doubt as to whether or not a photograph is to be taken, the solution is simply to take it. Hindsight will certainly not be a comfort when a part of the scene which appeared to have no significance was not photographed and becomes of immense importance at a later date.

A primary theoretical aspect of crime scene photography is the notion that in order to adequately exhibit the crime scene, a sequence of photographs showing all pertinent locations in an organized manner must be compiled. As a basic guideline, the subject matter encountered is to be represented by a progression of "general to specific." In essence, this circumstance will involve the coverage of the crime scene from three major vantage points 1) long-range 2) mid-range and 3) close-up. The acquisition of photographs to document this coverage applies not only to the crime scene location as a whole, but also to each segment of the

scene investigation. For example, long-range photographs of an apartment complex may be an aerial view of the entire scene area, or long-range photographs may be considered as a view down a long hallway looking into a bedroom. The interpretation of the meaning of long-range, mid-range and close-up will depend on the immediate area in which the crime was committed, as well as the overall location involved. In agreement with the foregoing is the statement that each stage of the commission of the crime must be treated and photographed separately. Photographs can effectively then be utilized to not only pictorially record conditions, but also to reproduce events. A jury in the courtroom could be logically presented, for example, with a compilation of pictures illustrating the subjects approach to the scene, entrance into the scene, commission of the crime and departure from the scene.

An important aspect of consideration regarding the various "range" photographs is the general point-of-view established by the camera locations. These locations will enable the viewer of the pictures to orient the crime scene in a logical manner. For example, in an interior area (living room of a home) the photographs would be represented in the following manner: The long-range pictures of the overall scene fundamentally are taken to portray the area as if a person viewing the scene is seeing it from the standing position. To obtain this result, the photographer takes the photograph with the camera positioned at eye level. The mid-range photographs are usually taken in a manner which portrays the scene from approximately ten to twenty feet of distance from the subject matter. In order that the viewer be permitted to associate the general crime scene with

separate areas of the scene photographed, these areas should contain sufficient detail to permit this association. The close-up photographs are normally taken approximately five feet or less from the subject matter. The attention of close-up photography is directed to items which could not be effectively seen and studied in the long-range or mid-range pictures.

Utmost effort must be directed to the usage of measurement scales when photographing elements of the crime scene for size and distance relationships. Whenever practicable, depending on the photographic subject matter, measuring devices should appear in the photographs for this purpose. However, it is important to note that the court may demand to see a photograph without the clutter of extraneous scale devices. Therefore, when a measurement scale is necessary, the subject matter should first be photographed in an "as-is" condition prior to the taking of pictures having the addition of scale or identification markers.

One of the advantageous ways in which to document the various photographic views is to record on a sketch the location from which each photograph was taken. The sketch can then be utilized as readily available reference concerning questions raised regarding the point-of-view represented in the photographs. For investigative and courtroom purposes, a copy of the sketch can be attached to each photograph, with the specific point-of-view location indicated separately by marking on the sketch in a colored ink.

When considering the subject of photographic views of the crime scene, the different "range" photographs can usually be categorized as those: 1) focusing on the "location" of the crime 2) concentrating on the "nature" of the crime 3) centering on the "results" of the crime 4) featuring the "physical" evidence existing at the scene 5) focusing on "follow-up" activity not directly occurring at the immediate scene.

The location photographs should depict the various places which are part of the crime scene area. Aerial photographs, exterior dwelling pictures and interior dwelling photographs are examples of this idea. The nature of the crime should be depicted by the photographs in a manner which will assist the investigation in determining the type of crime and differentiating, for example, a homicide from a suicide in cases which do not readily offer obvious answers. The results of a crime may have several aspects. By way of exemplification, a rape incident may have begun with a house break-in through a kitchen door, continued with vandalism and culminated with the rape of the victim who confronted the intruder. Therefore, the results of each portion of the crime are depicted, as discussed previously, in a sequential fashion to reproduce events. Of great relevance is the recordation by photography of the physical evidence. The inclusion of depictions of all evidence in relation to the entire scene will ultimately enable the connection of the evidence to be made in the courtroom

1) with the crime scene, and 2) with the defendant. The follow-up photographs represent an outgrowth of the crime scene investigation. Autopsy photographs and photographs of a live victim or suspect to show bruises or wounds are prime examples of this category. An integration of the information recorded photographically at the actual scene and in follow-up areas will reveal a greater depth of understanding of the realities of the crime scene. Most importantly regarding the photography of physical evidence at the scene is the fact it will be a major component in establishing the chain of custody of items introduced in the courtroom.

Because of the number and types of photographs which are normally taken at a thorough crime scene search a procedure must exist to record the chronology of pictures taken and pertinent technical and practical data contributing to the photographic effort. The common technique used for this purpose is the maintenance of a photographic "log." This log is a complete record of photographic operations at the crime scene. Circumstances and location will determine the specific information which appears in the log; however, the following material is imperative: 1) identity of photographer 2) date and time 3) specific location of crime 4) orientation and description of photographic scene 5) type of camera 6) type of film 7) light source 8) distance from camera to subject 9) environmental conditions 10) focal length of lens 11) shutter speed 12) lens aperture. The accumulation of this information will assist the photographer in establishing the "how, when and where" of the crime scene

photographic operation in a detailed and professional manner in the courtroom. As an additional benefit, the log will provide a data reference source relating to the proper procedures to be used in the chemical development of the negatives and photographs. All original negatives and photographs which are represented by information in the photographic log are to be retained, even those which do not reach the desired level of success in terms of lighting or chemical development. Keeping this idea in mind, the photographic evidence should be treated in the same nondestructive preservation and protection manner as any form of physical evidence.

No matter how extensive are the photographic efforts at the crime scene, photographs must stand the test of legal admissibility. The general standards used to review the credibility of the photographs are: 1) accurate representations 2) free of distortion 3) material and relevant 4) unbiased. A critical aspect of admissibility which is based on all of these standards relates to the probative value versus the prejudicial value of the photographs. If a photograph is deemed to depict only the gruesome nature of a scene to excite the emotions of the viewer, then its potential to prejudice the viewer may outweigh its value as a purveyor of truth. Additionally, the distortion represented in a photograph may be so prominent that the accuracy and reliability of the photograph is severely questioned. The general categories of photographic distortion which frequently occur in crime scene photographs are generally the result of: 1) incorrect point of view

2) perspective difficulties and 3) tone problems. The point-of-view from which a photograph is taken can obscure objects or overly emphasize objects. Simply by controlling the point from which a viewer observes a scene the photograph can create a variety of inferences which have no bearing on the actual scene depicted. Perspective refers to dilemmas created photographically regarding distance and size relationships. Because a photograph is a two-dimensional representation of an actual scene which has three dimensions, it is extremely difficult to determine distances solely based on photographs. Optical illusions which will necessitate explanation in the courtroom can be produced as a result of perspective distortion. The distortions created by tone problems relate to lighting, exposure, chemical development, the paper used to print the pictures and all other factors of a similar technical nature. Tone distortion could be the result of improper camera settings at the actual scene or incorrect development procedures in the darkroom.

To contend with the questions of distortion in photographs taken at the crime scene, the fact of legal authentication is crucial. Generally the best situation is to have the person who actually took the photograph testify concerning the inherent accuracy of photographic representations of the scene. The law as a general rule recognizes that in some instances this may not be possible (i.e.: death of the photographer prior to trial).

A person who observed the actual crime scene and observed the photographs taken, or a person familiar with the scene location, may testify as to the authenticity of the photographs. Another consideration which will have direct bearing on the authentication is that the photographer need not be asserted as a "photographic expert". The emphasis should be directed at the fact the photographer operated equipment based on manufacturer's specifications and instructions to obtain the photographic product, which is supported through the photographic log prepared at the scene. The attempt by an unqualified person to claim to be an "expert" in crime scene photography may permit the defense to question personal knowledge in extremely technical areas, such as the physics of light and film technology.

The previous statements relating to the requirements which an "expert" in photography would legally have to meet obviously is not intended to portray the crime scene photographer as completely lacking photographic knowledge, training and experience. Certainly, in order to arrive at an acceptable product the photographer must have the basic knowledge to choose, maintain and operate the equipment. To confront these tasks the photographer should be aware of the fundamental operational capabilities and limitations in the areas of 1) film 2) lighting 3) lighting equipment 4) types of cameras available for specific purposes 5) types of lenses suited for various cameras and the use of these lenses 6) supplemental equipment which will increase efficiency (i.e.: tripods).

On a practical level the crime scene photographer must be familiar with the foregoing aspects primarily because a lack of understanding can cause the three main difficulties which are commonly experienced concerning the finished product. Normally the photographs will exhibit the results of 1) poor selection and composure of subject matter 2) poor focus adjustment, and 3) incorrect exposure. The ability of a photograph to gain the best possible representation of the scene rests upon its separation of the light, middle and dark tones appearing at the scene, which basically is accomplished through overcoming these mistakes.

It is apparent from the foregoing discussions that even a person who possesses a detailed level of photographic expertise is not necessarily qualified per se to be a crime scene photographer. Photographing a scene involves an understanding of all aspects of difficulties which can exist. If these aspects are not thoroughly examined and understood the photographic product of a crime scene can actually harm the prosecution of a case. "Taking pictures" is one thing - photographically documenting a crime scene for logical and convincing display to a jury is another. The person holding the camera must necessarily be aware of the theory of crime scene photography, which will then be combined with the practical and equipment operation segments of the task. Only when theory and practice have been integrated will success be complete.