**INFORMATION EXCHANGE**

Upon arrival at the crime scene, or designated meeting location, the Crime Scene Unit personnel will make contact with either the Agent or Officer who requested the crime scene processing services, or with the Agent or Officer assigned to oversee or manage the crime scene.

After contact with the Agent or Officer in charge of the crime scene, or during the crime scene briefing, the Crime Scene Unit personnel should obtain the following information, if applicable:

* Agency case number assigned to the investigation
* Type of Crime
* Exact location of the scene
* Case/Scene Agent names
* Names of victim(s) and personal information if needed
* Additional information may be required due to the type of crime scene investigation. That information may include, but it is not limited to:
  + Suspect information
  + Vehicle(s) information
  + Additional crime scene locations

**PRELIMINARY SURVEY OR CRIME SCENE WALK THROUGH**

A preliminary survey or walk through of the crime scene with the Agent or Officer in charge and any other Officers with specific knowledge of the incident should take place after the exchange of information. Crime Scene Unit personnel will attempt to establish a path to enter and exit the scene, avoiding the pathway used by the suspect, if possible, and to preserve the scene from possible contamination. During this walk through the Crime Scene Unit personnel will:

* Evaluate the crime scene, which will help in formulating a plan for processing the scene and the collection and preservation of evidence
  + - * Make appropriate notes of the scene, evidence located within the scene, and the condition of the scene/evidence
      * Determine if any additional equipment or specialized personnel are needed to process the scene
      * Confer with the Agent or Officer in Charge to determine what evidence needs to be recorded, collected, and what processing will occur at the scene

**NOTES**

Each crime scene investigation is unique, and as such, the recording of scene information and processing techniques utilized at a crime scene is an essential function performed by Crime Scene Unit personnel.

Crime Scene Unit personnel will record any relevant scene information, processing directions, or evidence collection requirements provided by the Case Agentor Officer in charge of the scene.

Crime Scene Unit personnel will utilize a Laboratory Notes form for the:

* Recording of case information obtained at a crime scene
* Recording of crime scene observations
* Documentation of scene processing techniques
* Documentation of evidence collection techniques or processes utilized
* Documentation of the condition of evidence/property collected

At a minimum, laboratory notes should document the following crime scene information:

* Case number
* Officer’s name that requested the crime scene processing services
* Names of the Case and Scene Agent or Officer in Charge of the scene
* Type of Crime
* Names of the Victim(s), Suspect(s), or Witness(es) (if applicable and available)
* Date and time of arrival on scene
* Exact location(s) of the crime scene(s)
* Start and end date and time of scene documentation, evidence collection, latent print processing, and any other specialized techniques
* Evidence inventory, including location collected from and condition
* Date and time of crime scene investigation completion

As each crime scene investigation is unique, the requirements or needs for documenting conditions at a scene are at times extensive. Conditions may be noted at one scene, while of no particular value at another. The following are recommendations that could be noted at a crime scene; however, this list does not cover all crime scene investigations.

* Lighting conditions, including daylight or darkness
* Weather conditions, including precipitation
* Newspaper or mail on the front porch or in the mailbox
* Whether lights were on or off outside of the residence
* Whether lights were on or off inside of the residence
* Appliances on or off (television or radio)
* Thermostat settings for heater or air conditioner
* Food or dishes on a table, or in the sink
* All doors, locked or unlocked
* All windows, locked or unlocked
* Any damage to windows or doors and frames
* Scene appears to be neat in one area while cluttered in others
* Scene appears to be altered or contaminated
* Items missing or moved
* Wall surfaces may exhibit recent cleaning
* Carpet areas may exhibit recent cleaning while other sections of the carpet are untouched
* And other areas exhibiting cleaning on selected areas of fabrics, flooring and furnishings

Notations, which may be observed at a crime scene investigation on a street, highway, alley, parking facility, or other outdoor area:

* Vehicles parked in the vicinity of the crime scene
* Outdoor lighting, on/off and location

# Yard or street conditions

**PHOTOGRAPHY**

EQUIPMENT

The camera kit consists of a single reflex lens digital camera, lens, off-camera flash and associated camera accessories.When conditions or photographic techniques utilized require the elimination of movement, a tripod, monopod, or other device may be used. When conditions or photographic techniques utilized require specialized illumination, any other approved light source (e.g. Alternate Light Source, flood-lights, etc.) may be used in conjunction with the camera kit.

Scales, rulers, markers, flags, or any other generally accepted means may all be used during the capturing of images in accordance with acceptable forensic imaging techniques.

IMAGE CAPTURE

All image capture techniques will be in accordance with acceptable forensic practices and photographic techniques. The photographer will take every step to ensure all images are properly exposed and in focus. Photography techniques such as Shutter Priority, Aperture Priority, Program, Manual, Slow Sync, Painting with Light, Extended Time Exposure, etc. shall be dictated by the conditions, object to be photographed, the effect trying to be achieved, and generally accepted forensic photography techniques.

Digital images shall be captured at the highest JPEG resolution and image size available on the camera. Images which may be used for comparison and individualization shall be captured by a non-compression digital file format such as TIFF or RAW.

PHOTOGRAPHY

Photography of the scene and of evidence is one of the first duties performed at a scene. This form of documentation generally occurs after the note taking process has begun and prior to evidence collection. Photography is utilized by the laboratory to record the crime scene as first observed by the Crime Scene Unit personnel. The start and end times of the photography will be recorded in the Crime Scene Unit Personnel notes.

Crime Scene photography is primarily focused at documenting the following aspects. Photographic documentation starts with the location of the overall scene within a jurisdiction. Second, when portions of the scene are photographed, the photographs will be taken in such a manner that the portion of the scene photographed will be identified and oriented with other areas in the overall scene. Last, items of evidence will be photographed in such a manner as to identify the item and place the item in relation to other items within the crime scene.

To accomplish this documentation, the photographic process utilized by the Chula Vista Police Department Crime Laboratory is primarily a three-step process. This three-step process applies to crime scenes, vehicles, individuals, and evidence.

* A long or wide-angle view which places the location of the scene; referred to as an orientationor overall photograph.
* A medium or mid-range view, which focuses showing the location of particular areas, objects or items of evidence within a scene; referred to as a relationship or mid-range photograph.
* A close up view that clearly shows what the item is, the condition of the item, and the position collected at the scene, or identifying mark/number; sometimes referred to as the identification or close-up photograph.

Crime Scene Unit personnel will at times utilize rulers and item identifiers at crime scenes to identify items or areas being photographed. When used at a crime scene, photographs will be taken of the object or area with the ruler/ item identifier and without the ruler/ item identifier. Rulers used in the scene photography will be calibrated against a NIST traceable ruler. Rulers used in photography which are not calibrated against a NIST traceable standard will be saved with the evidence item or in the case notes.

At times, a comparison photograph is taken of an item, such as, tool mark, footwear impression, tire mark impression, visible fingerprint, or developed latent print. When this type of evidence is photographed, the camera will be set to shoot at a non-compression digital file format, such as TIFF or RAW.The item frame should be composed so that the item and ruler is filling the frame as much as possible. The off-camera flash should be positioned to bring out as much detail in the impression as possible

When evidence has been identified as having been moved from its original position, by Chula Vista Police Department personnel, at a crime scene, the Crime Scene Unit personnel will document this information in their laboratory notes. Photographs are taken of item(s) of evidence in the location from where the Crime Scene Unit personnel collected that item. If the Agent, or Officer in charge of the scene, directs the Crime Scene Unit personnel to photograph the evidence item in the location from where the item was moved, that photograph will be taken. A notation will be made in the Crime Scene Unit personnel’s laboratory notes detailing that the item was photographed in the area from where it was moved.

Aerial photographs are taken of crime scenes at the Agent or Prosecutor’s request. The photographs will show the target location from four sides. These photographs will be taken as vertical as possible to give the birds-eye view perspective.

DIGITAL IMAGE MANAGEMENT

All photographs taken in connection with a Crime Laboratory investigation will be uploaded into the Chula Vista Police Department secure digital image management system. Blank, out of focus, blurry or “mistake” are images are not to be deleted but uploaded to the secure digital image management system with all other photographs. None of the digital image metadata will be changed prior to uploading the photographs into the secure digital image management system.

A copy of the photographs will be recorded onto a digital media disk and submitted to the Chula Vista Police Department Evidence Control Unit as an item of evidence. The digital media disk will be labeled with “Original”, case number, property tag, and item number. Each disk will contain images from only one case.

Photographs for all homicide and Officer Involved Shooting (OIS) cases will be recorded onto archival quality digital media disks.

**CRIME SCENE SKETCH**

The crime scene sketch is a record of the size and distance relationships of the crime scene and its physical evidence. The sketch shows the evidence to be recovered, major structures present in the crime scene, and other relevant structures in or near the crime scene.

Typically, a crime scene sketch is drawn from a “birds-eye view” perspective. If the crime scene presents evidence at various heights, a side-view or elevation sketch can be made. The elevation sketch is used for supplementing the side-view appearance of the still photography.

A rough sketch is made at the crime scene prior to the evidence recovery. The order in which the sketch is prepared may change due to conditions which may destroy or cause evidence to be lost. In these cases the fragile evidence will be collected prior to the sketch. The physical location of recovered item of evidence will be marked so that measurements can be made, from the marker, when the sketch is prepared

MEASUREMENTS

All measures will be based upon the determination of fixed or known starting points. The fixed points should be permanent; this will allow the crime scene to be reconstructed at a later time if needed.

The sketch should also include the following information:

* Case number
* Scene location or address
* Date of the incident
* Crime Scene Unit personnel Name and Identification number
* The legend which should include a directional (i.e. North, South, East, West or neighboring Streets), whether the sketch is to scale or not, and description for any labels that were used.
* Beginning and ending dates and times.

A final or finished sketch is made from the rough sketch. This finished sketch may be computer generated and will list the above information.

**EVIDENCE**

It is important to maintain the integrity of the physical evidence collected at the crime scene and to insure that it is not compromised. The following procedures are used to ensure all evidence collected by the Chula Vista Police Department is collected in a manner to ensure the integrity of the evidence and the item is not lost.

Evidence Collection normally occurs after the crime scene sketch. However, the order of the evidence may change due to conditions which may destroy or cause evidence to be lost. In these cases the fragile evidence will be photographed the normal manner and collected prior to the sketch.

SEARCH

The Crime Scene Unit personnel will perform the evidence search with the Scene Agent or Officer in Charge. The search will be done in a systematic and careful manner. The process will begin with the preliminary survey/walk through of the crime scene, followed by a detailed survey, which includes the determination of the evidence collection sequence to be used. Finally, the final survey, which insures all evidence, has been collected and no equipment is left at the scene.

COLLECTION

Each Crime Scene Unit personnel will perform the evidence collection process in a systematic and careful manner.

The evidence collection sequence will be based on:

* The scene location: interior, exterior, within a vehicle or other location
* The fragile or stable conditions of the evidence
* Weather conditions which might affect the scene, or evidence contained within the scene
* Scene management problems, which may contribute to alteration or contamination of the evidence
* Additional processing techniques such as bloodstain pattern analysis that may need to be conducted at the scene

CHAIN OF CUSTODY

The chain of custody will be established whenever Crime Scene Unit personnel takes custody of evidence at a crime scene, or when evidence is received during the crime scene investigation. The chain of custody begins at the time the evidence item is marked for documentation. The Crime Scene Unit personnel will document all evidence items according to the established photography and sketching procedures. The date, time, and location that all evidence was collected will be documented in their notes. All evidence will be properly inventoried, described, marked, and packaged.

All evidence recovered during a crime scene investigation will be inventoried both in the notes and on a Property and Evidence Tag or Property and Evidence List prior to submission to the Chula Vista Police Department Evidence Control Unit.

Evidence items that are received from another Chula Vista Police Department Employee will be documented in Crime Scene Unit personnel notes to include the date and time of the transfer, condition of the item and packaging (if applicable) and signature of the releasing party.

ITEM IDENTIFICATION

Evidence item descriptions will accurately and thoroughly document evidence under their control. The descriptions of evidence will be thorough enough to, if possible, identify that item from any other item.

Each item of evidence will be identified using a unique item number. Items of evidence that are collected, by removing the item from the scene, will be identified by a whole number and correspond to the item identifier used at the crime scene. The items of evidence will be numbered sequentially starting with item #1. Items collected from multiple scenes connected to a single case will continue with the sequential numbering.

Items of evidence that are removed from a scene will be given a number as the item identifier. Items of evidence that are not removed from the scene but photographed or documented by another means will be identified using a letter.

Examples:

* At a crime scene evidence is collected and assigned evidence item number 1-10.
* A footwear impression is found at a scene. The impression is photographed using a letter as the identifier. A casting of this impression will be given a number as the identifier.
* A patent print photographed at a scene will be identified with a letter.

Derivative evidence items are numbered using a whole number (the source evidence item number), followed by a decimal point, and at least two digits.

Examples:

* If a vehicle is involved in the investigation, that vehicle will be given a whole number as the item identifier. For example item #11. Each item of evidence collected from the vehicle will be given a decimal item number such as item #11.01, 11.02 etc..
* If latent print lift cards are collected from evidence item #3 they will be labeled item #3.01, 3.02, 3.03, etc.
* If evidence swabs are collected from evidence item #2.01, they will be labeled item #2.01.01, 2.01.02, etc.
* Collected items of evidence for each print will have the same evidence item number. A latent print on an item of evidence (item #4) will be designated as item #4.01. The photograph of that latent print will have the item #4.01 in the frame. The lift of that same print will also be item #4.01.

Each item of evidence will be marked with the Chula Vista Police Department Case number and the initials of the Crime Scene Unit personnel who collected the item of evidence. The marking should be in a place on the item that will not destroy other potential evidence.

If an object is too small to reasonably mark, that object will be placed in a packaging material (such as a coin envelope or paper bindle) and that packaging material will be marked with the unique item identifier.

If an item of evidence contains multiple objects within the evidence packaging each object must be given a unique item identifier if examined. Each object will be given a letter designator.

EVIDENCE MARKING AND SEALING EVIDENCE

All evidence packaging will be marked or labeled, at a minimum, with:

* Chula Vista Police Department Case Number
* Property Tag Number
* Item Number
* Date Collected or Received
* Collector's Initials and Identification Number

All evidence will be sealed in the evidence packaging designed to protect and contain the evidence item. All openings of the packaging shall be sealed closed with evidence tape. The sealer’s signature or initials, identification number and date will be written across the tape and the packaging.

Evidence will be sealed when in general storage. When evidence is being processed or analyzed it may be placed in temporary storage and it is not required to be sealed.

If an item of evidence is repackaged from its original packaging; the new packaging will be marked with all of the case information. The original bar code will be affixed to the new packaging. The original packaging will be sealed within the new evidence packaging.

All evidence submitted to or received from the Chula Vista Police Department Evidence Control Unit will be properly sealed. Evidence packaging is properly sealed only if its contents cannot readily be lost, contaminated or removed without altering the seal.

All evidence collected from a crime scene, or received by Forensic Specialists at or during a crime scene investigation, or generated during the evidence processing will be inventoried and packaged to prevent cross contamination prior to leaving the scene.

ITEM SUBMISSION

### All evidence collected by Crime Scene Unit Personnel will be inventoried on one of the following:

### Property/Evidence Form (PD-564)

### Continuation Form

### Evidence List

Each item will be listed by item number, quantity, and item description. The description should be sufficient to distinguish the recovered item from similar items.

All evidence submitted to or received from the Chula Vista Police Department Evidence Control Unit will be properly sealed. Evidence packaging is properly sealed only if its contents cannot readily be lost, contaminated or removed without altering the seal.

**PROCESSING FOR IMPRESSIONS EVIDENCE**

SHOE AND TIRE IMPRESSIONS

Shoe and tire impressions in dust, dirt, or other contaminants are at times found at crime scenes or on items of evidence. In the event that this type of evidence is found at a crime scene, the Crime Scene Unit personnel will document the impressions using the following steps.

* Document the type, size, and location of the impressions
* Photograph the impression with and without a scale. Fill the frame with the impression.
* Photograph using a non-compressed digital file such as TIFF or RAW file format
* Document the start and end date and time for photography and evidence collection.

SHOE AND TIRE IMPRESSIONS COLLECTION

If the shoe or tire impression is on a surface that can be transported; that surface will be collected as an item of evidence and processed in the laboratory. If the item can not be transported, an attempt will then be made to recover the impression; if possible, using the appropriate lifting techniques.

The shoe and tire impression collection techniques available include the following:

* Electrostatic dust-print lifter is very effective tool for lifting dry-residue impressions. It allows the impression to be recovered and it enhances impressions by providing increased contrast of the generally light colored dust residue impressions against the black lifting film. This process will not lift wet-origin impressions, but will not harm impressions that are not lifted. Therefore, the electrostatic lifter should precede other methods of recovery and enhancement if the nature of the impression is uncertain.
* Polyvinyl Siloxane (PVC) Casting Material creates an actual life-size molding of an impression. PVC reveals every characteristic including the unevenness of the surface and the variance in the depth of the impression. It is capable of reproducing all the detail present in an impression, including microscopic detail, which can later be closely examined in the laboratory.
* Gelatin lifters are used to lift fingerprints, shoeprints, dust marks and trace evidence. The gelatin layer makes it possible to lift impressions in dust from almost every surface, including porous materials such as paper or cardboard.

Gypsum casting material creates a three-dimensional impression of those impressions that have depth in addition to length and width. They are most commonly found at outdoor crime scenes in soil and sand. Whereas photography is worthwhile and absolutely necessary, casts capture additional qualities that may be present but are not revealed with photography. Casting and photography supplement one another and together can provide the maximum information about an impression to the examiner

**TRACE EVIDENCE**

Crime Scene Unit personnel have been trained to recognize trace evidence, understand the potential value of trace evidence, preserve the sample, and obtain control samples. When Crime Scene Unit personnel encounter obvious items of trace evidence, it should be documented and recovered immediately thereafter depending upon the conditions at the scene and stability of the item of evidence.

Crime Scene Unit personnel will attempt to recover trace evidence at a crime scene, from a person, or from evidence recovered at the scene. If trace evidence is found, it should be photographed in place, and documented in the Crime Scene Unit personnel laboratory notes to include the following:

* The location from where the evidence was recovered
* The description of material
* The amount of material, or if only a sample was taken
* The condition of the evidence, (i.e. wet, powder, etc.)
* If controls or standards are obtained, the location should be documented

Crime Scene Unit personnel should use the following sequence as a guide to search for, and collection of trace evidence:

* Visual – Search using available light, oblique lighting using hand held lights, and alternative light sources. If trace evidence is observed the evidence can be retrieved with forceps or with gloved hands. Care should be taken to prevent damage or stretching of the hair during the retrieval process.
* Adhesive Lift – An adhesive bearing substrate such as tape can be firmly patted over areas suspected of containing trace evidence causing the material to adhere to the sticky surface. Do not overload the tape. Tape lifts are typically placed on a transparent backing (clear plastic sheet). This protects against contamination and permits samples to be easily viewed.
* Vacuum Sweeping – The use of portable vacuum cleaners, equipped with special traps holding a piece of filter paper, can apply in virtually any environment. The filter paper trap can be removed, folded and placed into a suitable container that is properly labeled.

**ENTOMOLOGY**

SCENE OBSERVATION AND WEATHER DATA

Entomological investigation of the death scene can be broken down into the following steps:

1). Observations of the scene should note the general habitat and location of the body in reference to vegetation, sun or shade conditions, and its proximity to any open doors or windows if recovered within a structure.  Locations of insect infestations on the body should be documented as well as noting what stages of insects are observed (such as eggs, larvae, pupae, or adults).  It is also useful to document evidence of scavenging from vertebrate animals and predation of eggs and larvae by other insects such as fire ants.  Observations such as these can be noted on the [*Death Scene Form*](http://www.forensicentomology.com/Dform.pdf)*.*

2). Collection of meteorological data at the scene.  Such data should include:

a). Ambient air temperature at the scene taken approximately at chest height with the thermometer in the shade.  DO NOT EXPOSE THERMOMETER TO DIRECT SUNLIGHT!

b). Maggot mass temperature (obtained by placing the thermometer directly into the larval mass center).

c). Ground surface temperature.

d). Temperature at the interface of the body and ground (simply place the thermometer between the two surfaces).

e). Temperature of the soil directly under the body (taken immediately after body removal).

f). Weather data that includes the maximum and minimum daily temperature and rainfall for a period spanning 1-2 weeks before the victims disappearance to 3-5 days after the body was discovered.  Such information can be gathered by contacting the nearest national weather service office, or your state climatologist.

COLLECTION OF INSECTS FROM THE BODY

The first insects that should be collected are the adult flies and beetles.  These insects are fast moving and can leave the crime scene rapidly once disturbed.  The adult flies can be trapped with an insect net available from most biological supply houses.  They are inexpensive and readily obtainable.  Once the adult flies have been netted, the closed end of the net (with the insects inside) can be placed in the mouth of a "killing jar" (which is a glass container with cottonballs or plaster soaked with ethyl acetate, or common fingernail polish remover).  The jar is then capped and the insects will be immobilized within a few minutes. Once they are immobile they can be easily transferred to a vial of 75% ethyl alcohol.  Beetles can be collected with forceps or gloved fingers and placed directly into 75% ethyl alcohol.

It is extremely important that the collected specimens are properly labeled. Labels should be made with a dark graphite pencil, NOT IN INK.  The label should be placed in the alcohol along with the specimens, and alcohol can dissolve the ink from the paper!   However, pencil is not affected by alcohol and should be used for labeling purposes.   The collection label should contain the following information:

1). Geographical Location

2). Date and hour of collection

3). Case number

4). Location on the body where removed

5). Name of collector

\*\*A duplicate label should be made and affixed to the exterior of the vial.\*\*

Once the adults have been collected the collection of larval specimens from the body can begin.  First the investigator should search for the presence of eggs, which are easily overlooked.  After this step, the larvae should be readily apparent on the body. Generally speaking, the largest larvae should be actively searched for and collected.   Additionally, a representative sample of 50-60 larvae should be collected from the maggot mass.  These insects can be placed directly into a killing solution or ethyl alcohol.  However, the specimens are better preserved if they are placed in boiling water for about 30 seconds.  Obtaining boiling water at a scene is difficult, so boiling of the larvae upon returning to the proper facility is satisfactory.  If the larvae are boiled with about 48 hours of initial preservation, a good specimen should result.   It is important to note that some forensic entomologists prefer not to have the submitted larvae boiled.  Therefore, the investigator should discuss preservation techniques with their cooperating entomologist.  In any case the exact preservation techniques should be documented and forwarded to the forensic entomologist. If the body has more than one area of colonization (more than one maggot mass) each site should be treated separately.

Once the preserved collections have been made, duplicate samples should be made for live shipment.  Living specimens can be placed in specimen containers or Styrofoam cups with tight fitting lids along with some moist paper toweling, or most preferably a food substrate such as beef liver, pork meat, or cat food.  Tiny air holes should be poked in the lid using an ice pick or similar instrument.  This cup should be placed into a slightly larger container that has about 1/2 inch of soil or vermiculite in the bottom to absorb any liquids that may accumulate and leak.  This entire container should be enclosed in an appropriate shipping container and shipped overnight to a forensic entomologist.

COLLECITON OF INSECTS FROM THE SCENE AFTER BODY REMOVAL

Many of the insects that inhabit a corpse will remain on, or buried, in the ground after the body has been removed.  The steps listed above should be followed when collecting insects from the soil (i.e. both a preserved and a living sample should be taken).  Soil and litter samples should also be taken both immediately under where the body was positioned, and from the immediate surroundings.  It is not necessary to dig deeply.  A good technique is to collect the leaf litter and debris down to the exposed upper surface of the soil, and then make a separate collection from about the first two or three inches of topsoil.  Each soil collection area should be about 4-6 inches square, and be taken from underneath the head, torso and extremities.  All soil samples should be placed in a cardboard container for immediate shipment to a forensic entomologist.  These collections should be labeled and forwarded to the forensic entomologist along with the insects collected from the body.