Crime Scene Mapping and Diagramming

Forensic Science
10/23/00 Death Investigation
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Legend
1. Blood pool
2. Bat w/blood + hair
3. Victim
4. Bloody footwear impression
Reasons why Crime Scene sketches are made:

• Permanent record of conditions of scene
• Can be used to reconstruct scene
• Record of exact locations and relationships of pieces of evidence and surroundings
• Refreshes the memory of the investigator
• Helps correlate testimony of witnesses
• Eliminates confusing crime scene details
• Can be used in courtroom testimony:
  – Provides context and reference of objects for jurors, prosecutors, and investigators
  – Can assist investigators by allowing witnesses to place themselves within the scene while offering statements and testimony
Rough Sketches: what do you notice?

A - Body
B - Bullet found in wall
C - Blood stain on rug
D - Weapon
E - Footprint on lawn
F - Matches found on lawn
Rough Sketches

• Are completed at the crime scene
• Drawn by hand
• Should be detailed without too much clutter
• Should be a “birds-eye view” of scene
• Everything on the sketch must be measured with a tape measure (NOT a guess or estimate)
Elements of a crime scene sketch

- Measurements
- Compass directions
- Scale of proportion
- Legend or Key (tells what symbols mean)
- Title
What a Rough Sketch contains

- Contains an accurate depiction of the dimensions (measurements) of the scene
- Shows the location of all objects having a bearing on the case:
  - All recovered items of physical evidence
  - Other important features of crime scene: furniture, bodies, blood stains, photograph locations, etc.
How to make a Rough Sketch

• **MEASURE EVERYTHING ACCURATELY!**
• **Indicate the compass direction North**
• **Choose a Permanent Reference Point (a.k.a. “Datum Point”)**
  – For indoor crime scenes, corners of the room make best reference point (Ex: The northwest corner of the room)
  – For outdoor crime scenes, choose something permanent and immovable: a fire hydrant, telephone pole, corner of a building, etc.
How to make a Rough Sketch: How to Measure

• Two ways to take measurements: Rectangular Coordinates and Polar Coordinates
  – Rectangular Coordinates: similar to (X,Y) coordinates; taken at right angles to one another, from a reference point (like a wall)
  – Polar Coordinates: Measure an **angle and distance** from reference point-Datum Point

• Usually, Rectangular Coordinates are used (ie measured from 2 points)
How to make a Rough Sketch

• Starting from the Datum Point, measure and draw the outside / boundaries of the scene first
  – walls, doors, windows, parking lots, sidewalks, other natural boundaries

• Fill in the scene features
  – Furniture, doors, windows, fixtures, etc.

• Objects are located within the sketch by distance measurements from two fixed points, such as the walls of the room
Labeling Objects within a Sketch

• Assign each item a number or letter
  – A = cocktail glass
  – B = Telephone
  – C = Victim
  – D = bullet hole
  – E = blood stains
Finished Sketches

• After doing a Rough Sketch at the crime scene, a Finished Sketch is constructed with care and concern for appearance

• Usually Finished Sketches are done with Computer-Aided drafting (CAD)
Labeling a Body in a Sketch

• Measurements are usually taken from the head, hands, feet, and sometimes elbows, knees, chest, etc.
  – The more measurements, the more accurate the sketch
• If the body is indoors, measure from walls
• If the body is outdoors, set up a grid and measure from the edges of the grid