

Search Techniques



Clark County Sheriff Core Comp Rev. # 2018.1
Search Techniques

Core Competency Requirements

Requirement	Classroom - Performance Criteria
<p>Through written evaluation the applicant will demonstrate knowledge of the search techniques involved in Search and Rescue in the State of Washington.</p>	<ol style="list-style-type: none"> 1. The elements of the four (4) types of searches 2. Three passive & active search methods. 3. The importance of staying on assigned task as given by the Incident Command. 4. The reasons why searchers look for clues as well as the subject (list at least 4). 5. What to do when a clue is located. 6. The elements of a sound sweep search. 7. Describe three elements of "Critical Separation". 8. The advantages and disadvantages of searching at night. 9. The concept and use of; <ul style="list-style-type: none"> > POA (probability of area) > POD (probability of detection) > IPP (initial planning point) > LKP (last known position) > PLS (point last seen)

Field - Performance Criteria

Requirement	Field - Performance Criteria
<p>Through performance evaluation, the applicant will demonstrate the ability to:</p> <p><i>(These Field Performance Criteria – Must be performed in a field setting – Proficiency Must Be Demonstrated) Does Not Apply to Support or Limited Field Responders.</i></p>	<ol style="list-style-type: none"> 1. To determine "Critical Separation" in at least two different environments, i.e. wooded and open areas. 2. Demonstrate the ability to route search; <ul style="list-style-type: none"> ➤ Critical Separation (CS) for a prone adult body, wide on either side of the route and 50 yards long in ten (10) minutes. Nine to ten clothing objects, suitable to the adult body reference, and one (1) object representing an adult subject should be placed in the search area. A reasonable percentage of detection is expected and any adult body should be found (30% to 50%). ➤ Demonstrate effective evidence searching critical separation (CS) for small caliber cartridge cases, for an area 50 feet long, in open grass area such as a ball field with 1 to 2 inch high grass. Twenty (20) cases should be placed with the expectation of finding 15 casings in 10 minutes 1. 3. Locate, preserve and document potential clues/evidence in a given search area.

Four types of Techniques

- **Line Search**– Searchers line up at predetermined spacing moving forward. Used in evidence searches
- **Hasty Search** – A quick check of obvious trails or routes
- **Grid Search** – A methodical search of a defined area usually in a line formation
- **Containment Search** – Starting at the PLS, determine how far they could have gone then set up containment points in the hope they run into you.

Searches....

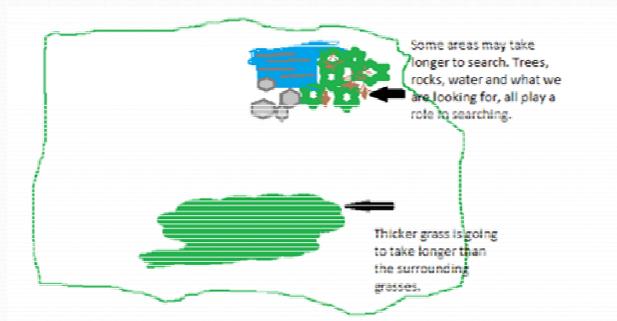
- There are various techniques utilized when searching for evidence. Dependence on what type of evidence is being searched for and the terrain, will assist in the decision.
- We mainly use line or grid searching methods.
- Line searches are the most common:
 - Searchers line in a single row in preparation to search an area. The terrain may impede a search, causing it to take more time or pace quicker.
 - If we are searching for a piece of an airplane in an open field, this will take less time than searching for a bullet casing in thick brush.

Line Search

- A group of Searchers moving abreast in a single direction
 - Lines can be as long as manpower dictates
 - Good for clue and evidence searches
 - All clue and evidence searches can be very tedious and time consuming
- The team may be shoulder's width apart or further, dependent on what we are looking for.
- The searcher on either end of the line marks the outer perimeter with grid tape (Team initial, date and time recommended)
- Team members should maintain a fairly straight line, each keeping an eye on each other, so no one gets too far behind or too far forward.
- The line begins by a TL or assigned personnel to make sure the line is ready and say "forward"
- If an item of evidence is located during the search, the person stops and clearly states "Hold the line". Other members say "hold the line" so everyone knows to stop. If a detective is directly in the area, raise your hand so you can be seen. Once the item is checked out, the line continues by stating "forward."

Line Search

- If a portion of the team comes across a thicket or an area that will take longer than the entire line, it is appropriate to break off into two teams, one focusing on the thicker portion, while the others move forward.



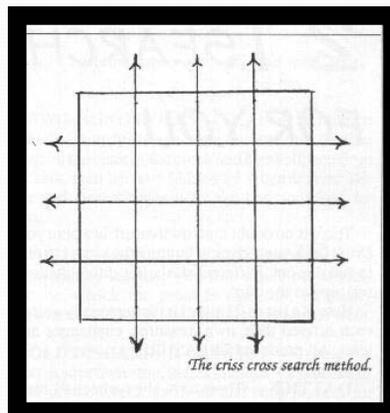
Hasty Search

- First searchers on the scene assigned out quickly to run trails or quickly check the area where the subject was last seen.



Grid Pattern

- Same as the Lane Pattern, but on the last lane searchers turn 90 degrees and search in a new lane pattern. This way an entire area is searched twice in two different directions.



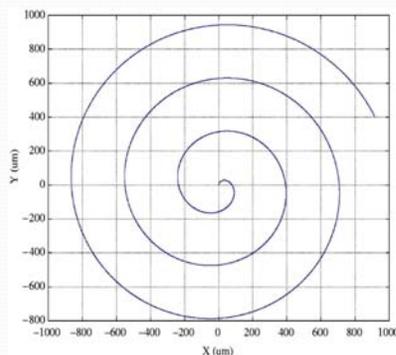
Containment Search

- Setting searchers at the outer perimeters of the search area to “Trap” the subject in the search area and hopefully contact them if they are still moving.



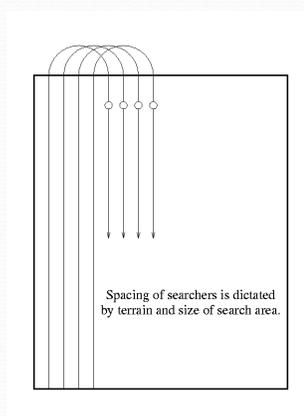
Circular

- Starting from an initial point, the search teams begin searching in a circular motion moving inward or outward.
- Used when terrain dictates or scene location is not positive.



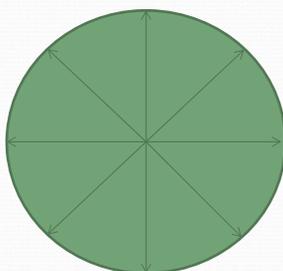
Lane Pattern

- Beginning at the end of a rectangle, searchers walk parallel to each other at the same pace.
- Upon reaching the end of the rectangle, searchers turn 180 degrees and walk in the opposite direction covering new ground.



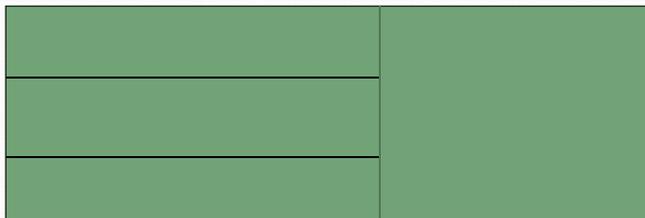
Wheel Pattern

- Searchers start at the center of an area and walk outward in a spoke pattern toward the perimeter.
- Repeat the pattern as many times as needed.

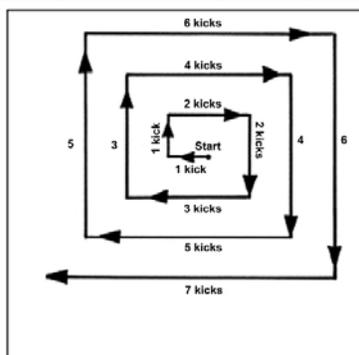


Zone Pattern

- Search area is divided up into quadrants, each of which is assigned to a searcher or group.
- Each quadrant can be subdivided as needed. Terrain or ground cover may dictate the size of the zone.



Square Spiral



Square Spiral Search Pattern

PPE and Tools...

- Eye Protection
- Thick gloves
- Knee pads
- Trowel
- Hand rake
- Loppers or a machete
- An area may be cleared by K-9, metal detectors, or weed eaters prior to evidence search.



What NOT to do

- During an evidence search if you are approached by the media, DO NOT discuss what/who/why you are searching. Direct all inquiries to the investigator.
- If the search is based upon information from an ongoing investigation, do not discuss particulars with anyone...family included.
- Never post or discuss mission details on social media.

What NOT to do

- Know your limitations. If you cannot perform during a search, tell your team leader prior to the start. The distractions of pain, exhaustion, etc. could cause you to miss a critical piece of evidence.
- Remember to let the environment “talk” to you.

Passive and active Search Methods

- Active Search – Sending assets directly out into the field such as Searchers, K-9, Aircraft
- Passive Search – Have the lost or missing come to you. Set up containment and then signal with light or sound or other attraction sources.

Staying on Task

- It is critical to stay on assignments given by the Command Post
- The tasks assigned, even if small, are all part of a bigger picture.
- Even if one small bolt is not tightened, the engine can seize and the mission fail

Importance of Searching for Clues as well as the Subject

- There are usually more clues than missing subjects
- Clues are usually stationary
- Clues assist greatly in search planning
- Helps searchers focus

When You find a Clue

- Notify the Command Post
- Record the location on a GPS. Remember to establish your datum and coordinate system for the mission ahead of deployment into the field
- Radio in it's location to the CP
- If requested - mark with tape and photograph
- Only if requested - retrieve the item

Sound Sweep

- Sound can carry a great distance
 - 1. Searchers stop at designated times
 - 2. A sound is generated
 - 3. Searchers listen quietly for 30 seconds for reply
- Repeat as needed

Critical Separation

- **Distance between Searchers**

It is affected by

- 1. Weather Fog and Rain
- 2. Light
- 3. Terrain
- 4. Ground cover

Searching at Night

- Advantages
 - 1. Sound - Carries further at night for signaling to subject or hearing subject
 - 2. Light - Easier for Subject to see searchers and searchers to see subject signals
- Disadvantages
 - 1. Visibility for searcher's
 - 2. Moving in terrain for searchers is more dangerous

Probability of Area

- Also known as POA
- Determining through investigation what the Percentage of probability is that the subject is in the area you are going to search
- Is based on mathematical formulas and other case studies

Probability of Detection

- Also known as POD
- The Probability that if the lost subject is in that area, that the Searches will find them
- Also is based on mathematical formulas and other case studies

Initial Planning Point

- Also known as the IPP
- Is used as the base point from which the initial distances are plotted when comparing the category of the subject with previous lost person behavior data. (Lost Person Behavior book - Robert J. Koester)
- Again, it is based on mathematical formulas and other case studies

Last Know Position

- Also known as LKP
- This position is based on positive identification of physical evidence linked directly to the subject
- The LKP changes as verified clues are located

Point Last Seen

- Also known as PLS
- This point is where there has been a verified visual sighting of the subject
- This point can also change as verified sightings come in

