



LECTURE 2
CARTOGRAPHY II- GEO 154
FT Okyere

WEBSITE FOR – ASSIGNMENTS AND LECTURE PRESENTATIONS

- www.franzy.yolasite.com
- Lecture Notes ready on next meeting. Sorry....

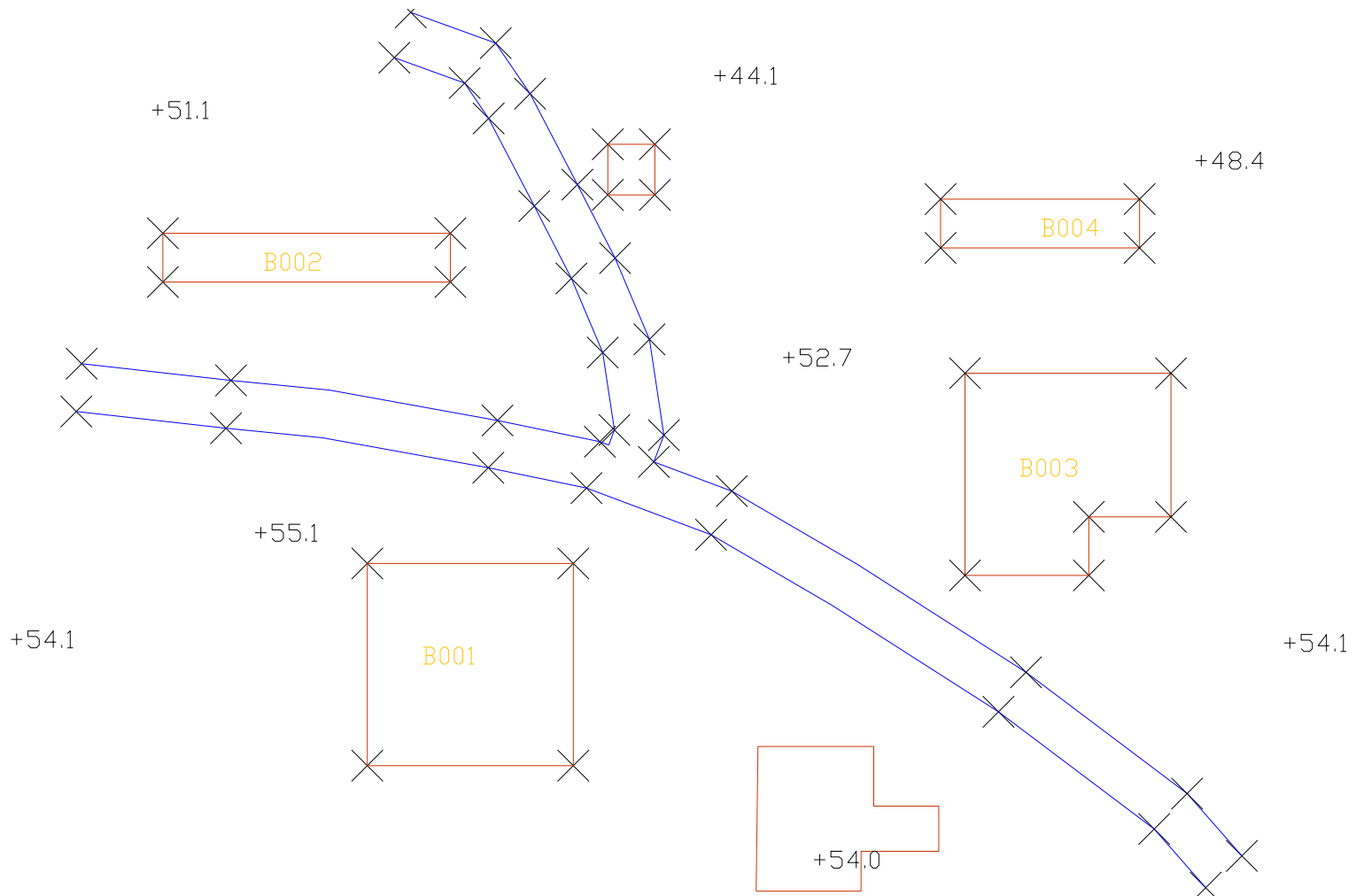


ASSIGNMENT FOR SEMESTER BASIC DRAFTING AND CONSTRUCTION

- Choose an appropriate scale and plot the following buildings, roads and elevation data and draw at least two contours (No two submissions should use the same scale).
- Get data sheet

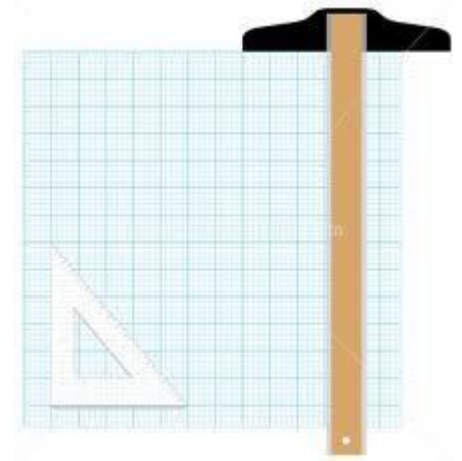
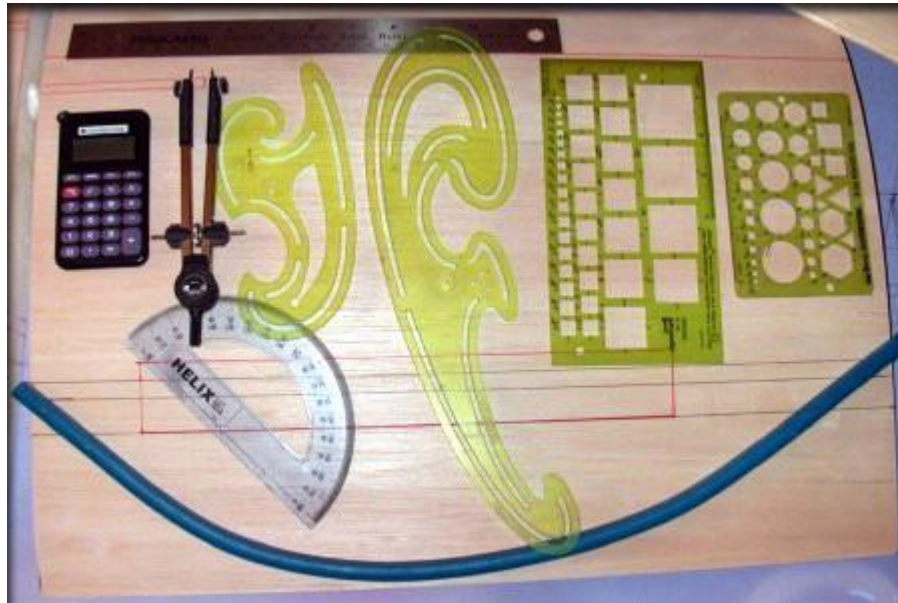


ASSIGNMENT FOR SEMESTER



INSTRUMENTS TO USE

- Scale rules and set square
- French curves
- Long straight edge(T-square)
- Drawing board
- Dividers and compasses



BASIC SCRIBING

- **Scribing** was used to produce lines for cartographic map production before the use of computer based geographic information systems(GIS).



BASIC SCRIBING - TOOLS



- A **stylus** (plural: *styli* or *styluses*) is a writing utensil, or a small tool for some other form of marking or shaping
 - Round point or chisel point stylus



BASIC SCRIBING

- Scribe sheet is a stable plastic base material



Not orange



BASIC SCRIBING- STEPS

- An impression (the original) of the corrected compilation sheet is photographed (camera or in-contact) onto scribe sheet material or drawn using pencil.
- on the scribe sheet are traced with a metal or sapphire-tipped scribe tool.
- lines of translucent coating are removed to produce a handmade negative image.



BASIC SCRIBING

- Compared to drafting ink is rather deposited in the image areas to produce a *positive of the original*.
- Other uses of Scribing
 - ‘Peelcoat’ is used to produce a negative of an area of detail such as a lake or forest. The border of the area is cut or scribed on the peelcoat and the coat of the sheet within the area is peeled off to produce a negative image.



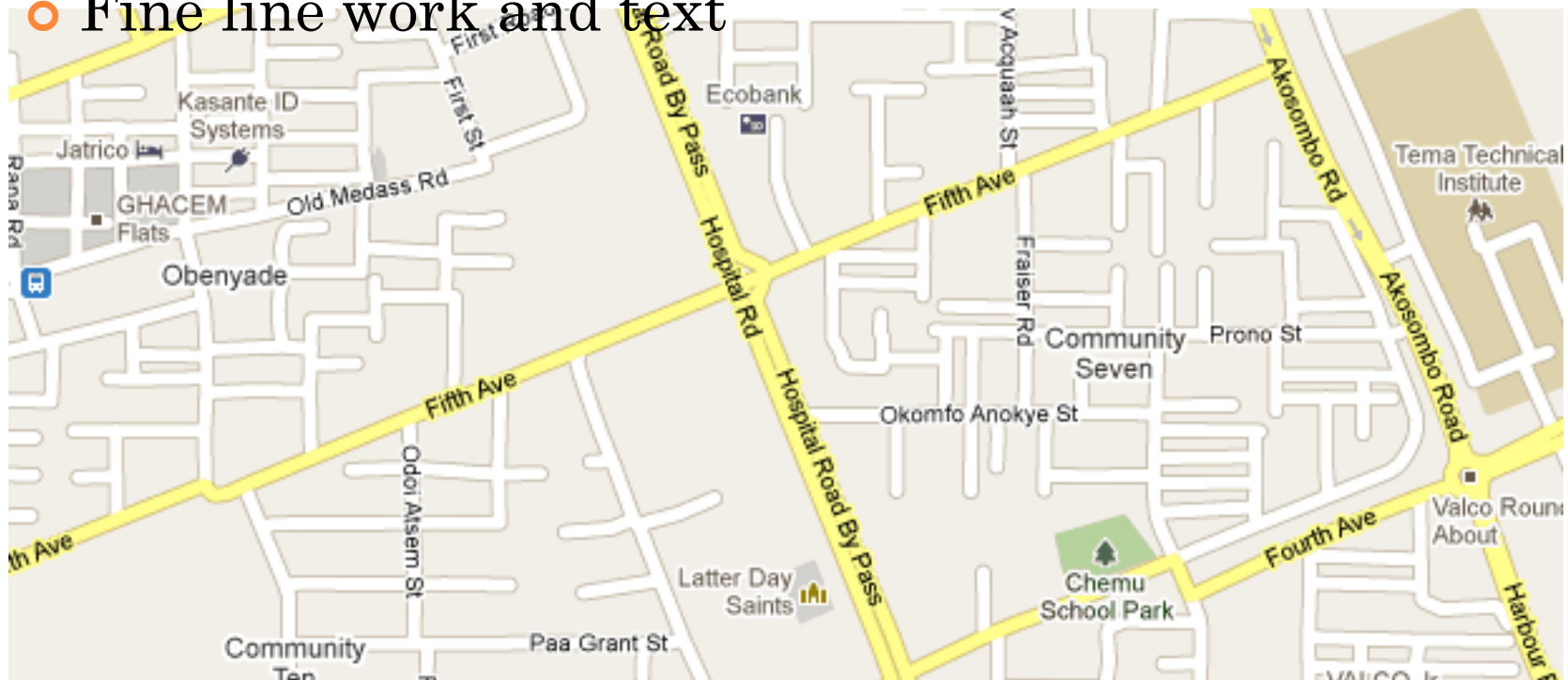
CARTOGRAPHIC REPRODUCTION TECHNIQUES

- Motivation:
- More than one copy of map needed
- Depends on Type of Map
 - Few copies for Engineering Projects (large scale)
 - 1000s of copies for certain Topographic Maps
 - Little variation in size or format of map but sizes are fairly large
- Colour
 - Design of map may require single colour or
 - Several colours



MAP REPRODUCTION TECHNIQUES

- Expected in Maps:
- Fine line work and text



- Colours should fit- No overlapping colour area



MAP REPRODUCTION TECHNIQUES

- These requirements of the final map demands that
 - Map production is versatile and
 - Accurate



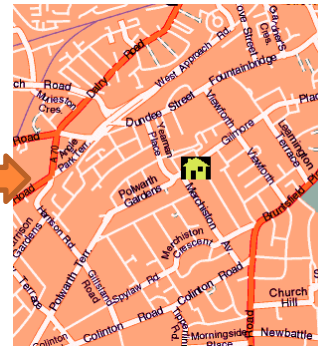
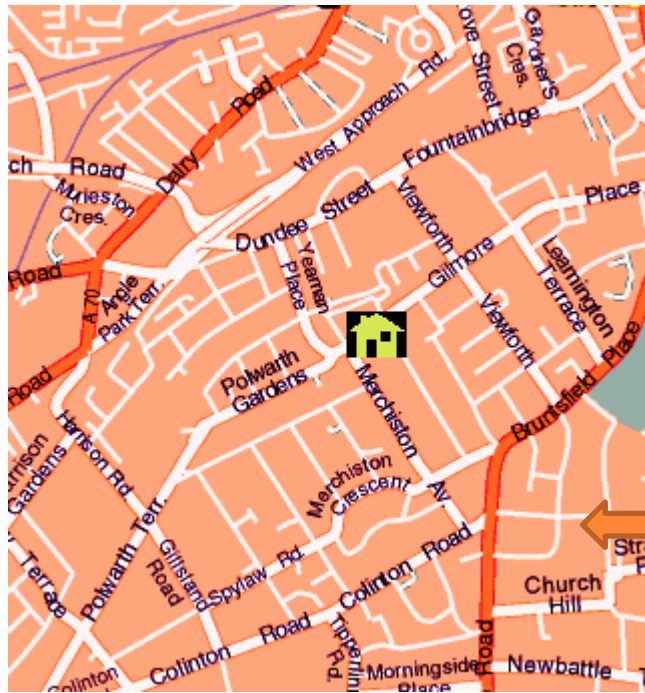
MAP REPRODUCTION TECHNIQUES

- Reproduction Department
 - Photography
 - Copy
 - Printing
- Corporation between these sections must be good in order to ensure efficiency in reproduction department



PHOTOGRAPHY SECTION

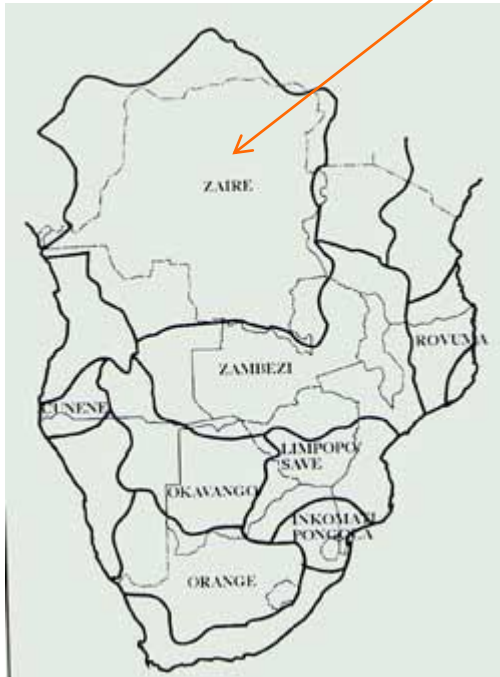
- Making enlargements or reductions of originals



PHOTOGRAPHY SECTION

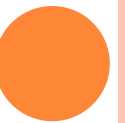
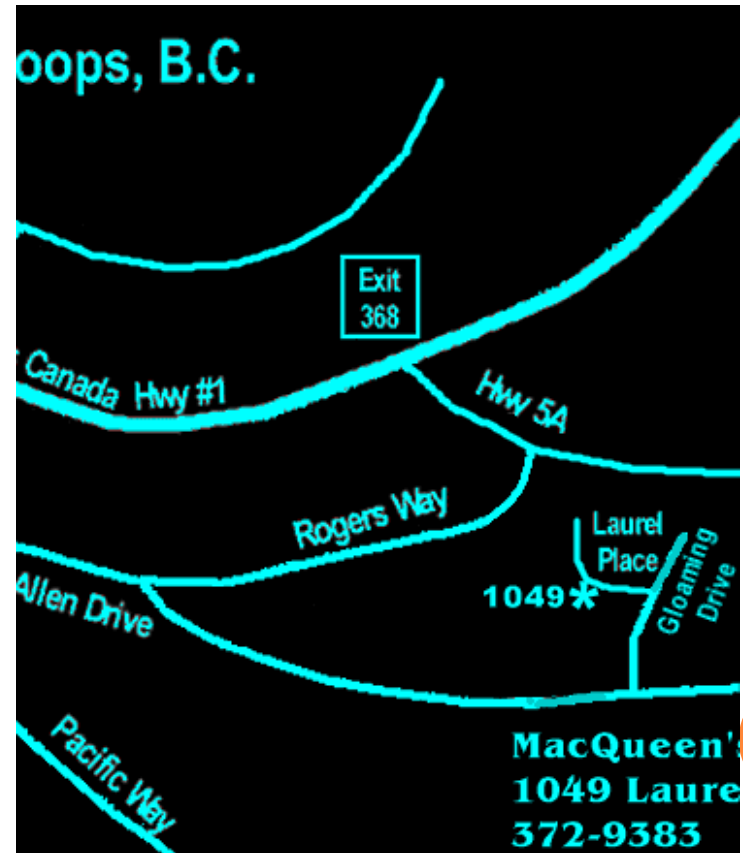
- Transferring opaque originals to transparent material

Opaque area transparent area



PHOTOGRAPHY SECTION

- Changing positive originals to positive



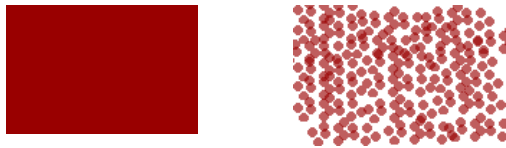
PHOTOGRAPHY SECTION

- Making right reading originals(RR) to mirror reversed(MR)
- RIGHT READING AND MIRROR REVERSED ○
- E.g. MS-
- Paint



PHOTOGRAPHY SECTION

- Converting continuous tone originals to half tone
- (A **continuous tone** image is one where each colour at any point in the image is reproduced as a single tone, and not as discrete halftones, such as one single colour for monochromatic prints, or a combination of halftones(discrete dots of colour) for colour prints.)



- Continuous tone Half tone



PHOTOGRAPHY SECTION

- Producing finished maps in the form of photographic copies



COPY SECTION

- Producing printing plates for the printing section:
- Producing colour proofs of maps on plastic or other materials
- Production of guides for drawing or scribing work
- Etching of lines into peel coat masks
- (**Etching** is the process of using strong acid or mordant(Latin word, "mordere", to bite) to cut into the unprotected parts of a metal surface to create a design in the metal)



PRINTING SECTION

- Production of completed maps printed in one or more colours.
- Packaging and Dispatch Section needs mentioning
 - Responsible for distribution of finished maps to customers



COPY SECTION SERVICES

- Aids to Draughting (or drafting) department
- Production of Plastic Proofs
- Production of Printing Plates
- Example: Topo map with 5 colours
- BLACK PLATE-
 - Road casings for major and minor roads,
 - Tracks
 - Railways,
 - Towns and
 - vilages

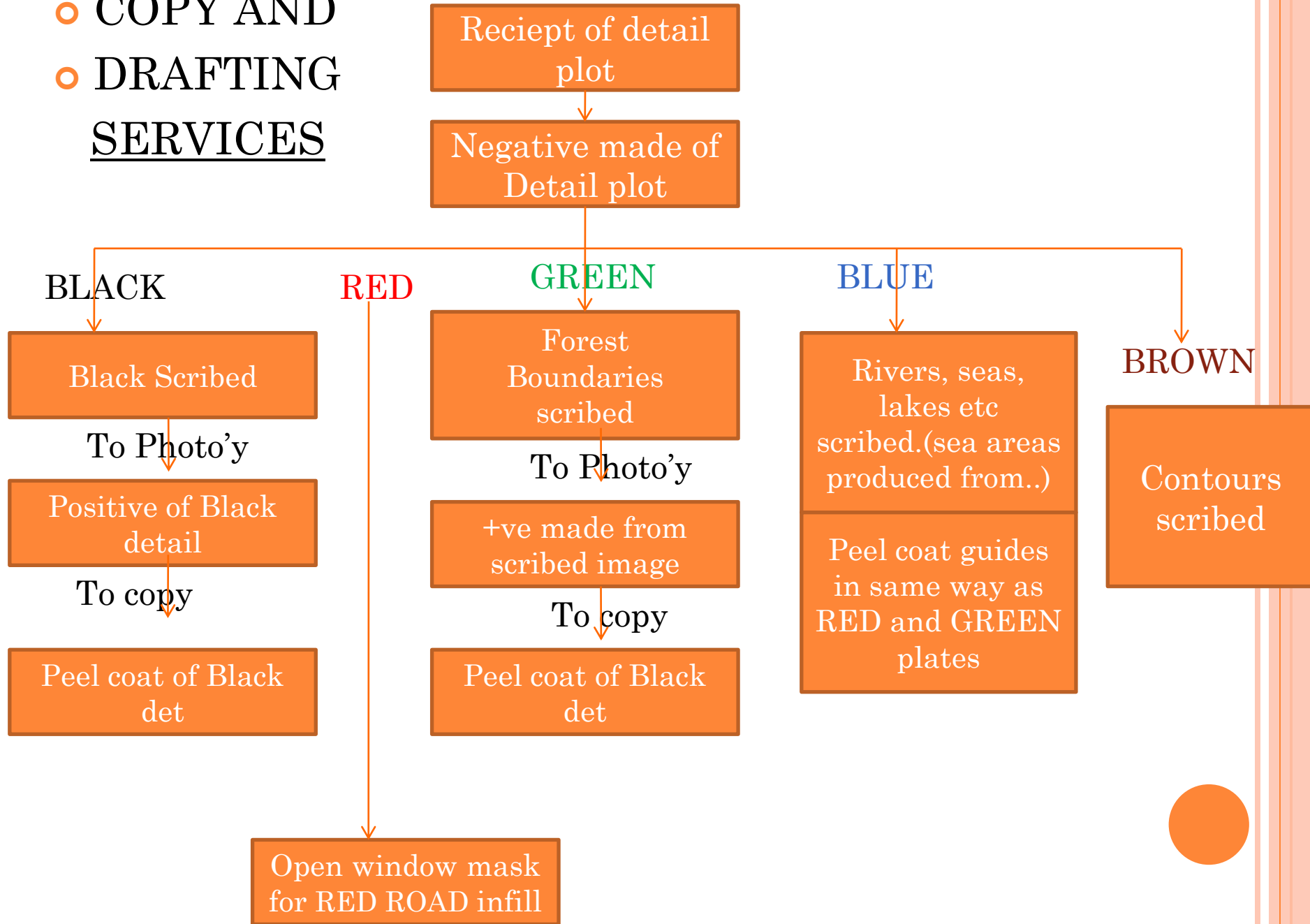


COPY SECTION SERVICES

- RED PLATE (not actually red)-
 - Infill for major road
- BLUE PLATE
 - Sea
 - Lakes,
 - Rivers
 - Streams
- GREEN PLATE
 - Forest and wooded areas(vegetation)
- BROWN PLATE
 - Contours



- COPY AND
- DRAFTING SERVICES



COPY SECTION SERVICES

- Scribing detail by laying translucent scribe-coat
- Disadvantages:
 - One man at a time- SLOW
 - Accuracy due to parallax (thickness of scribe coat)
- Alternatively
 - Produce images onto four pieces of scribe coat
 - Use Scribe coat



FERRO-PRUSSIATE BLUE OR BLUE KEY GUIDES

- Wiped onto paper or plastic.
- When exposed by U.V light the exposed areas turn light blue
- Unexposed areas are washed off
- Reapply a special developer if a deeper blue is needed
- FPB is +ve working



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○ Questions

