

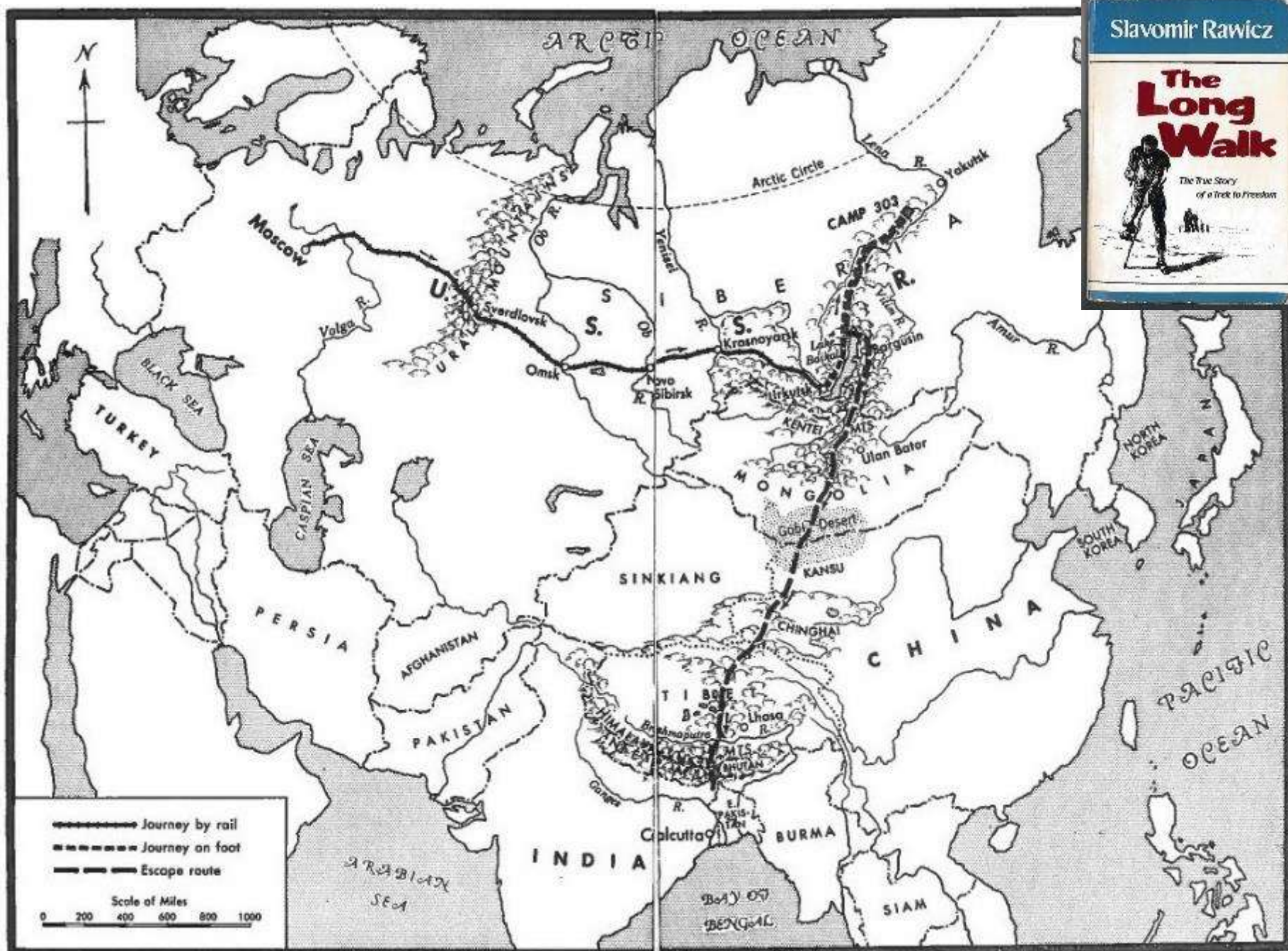
# Map Lettering

'labelling'

## General rule:

*Lettering is an extension of the symbol itself, and should be 'automatically' attached to it in the mind of the reader, both in design and positioning: 'good lettering' is barely noticed*

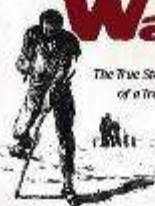
Lettering is like a soccer/hockey referee - if he doesn't make any mistakes, you don't notice him



Slavomir Rawicz

# The Long Walk

The True Story  
of a Trek to Freedom



# Lettering – overview

Perhaps the most challenging part of digital mapping  
[early computer maps were obvious by their lettering]

Consists of:

**a. Typography** – lettering design

**b. Positioning** – lettering placement

*a: can be easily automated in GIS software*

*b: is more subjective - needs manual input*

# 1. Typography: Visual Design Variables

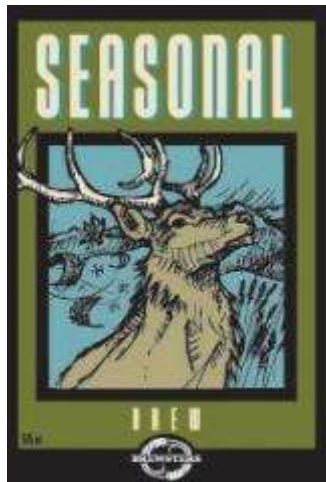
## a. Font (~shape)

- serif (e.g. Times)
- sans serif (e.g. Geneva)
- decorative (e.g. Joker)



Serif

Sans serif



Decorative



**Serif 2015**

Google™

[Google Search](#) [I'm Feeling Lucky](#) [Advanced Search](#)  
[Language Tools](#)

Google  
Canada

**Sans-serif 2016**



# Font Humour



I shot the serif.

Eric Clapton: <https://www.youtube.com/watch?v=tRgcwT9X2J8>



Font Choice is mostly based on preference and practicality..

... except for some nominal associations:

e.g. historical oldies

Stonehenge

One possible design ploy:

**Serif for natural features ?**

**Sans-serif for human features ?**

# Practical Choice of Lettering fonts

Wide range of choices in software -as in MS Office

**Legibility:** good distinction between letters in the alphabet

**Visibility:** good contrast between lettering and background

**Aesthetics:** avoid ugly letter proportions and faces

**Don't use Courier (typewriter) !!**

... or Gigi

***Comic Sans (1994) ?***





comic sans

still a better choice  
than trump



# **SCARY EXAMPLE OF POOR FONT LEGIBILITY:**

Would you sign your boys up for this league ?



**Spruce City Minor Boys Softball**

Ages 7 - 19

**FINAL REGISTRATION**

Call: Darlene 562-3119

Lorry 561-9171

157758

## b. Form: *italic* or upright



- *Italics* are reserved for hydrographic features (rivers, lakes, etc.)

Why ?

Underlining is **not** generally used

Why?





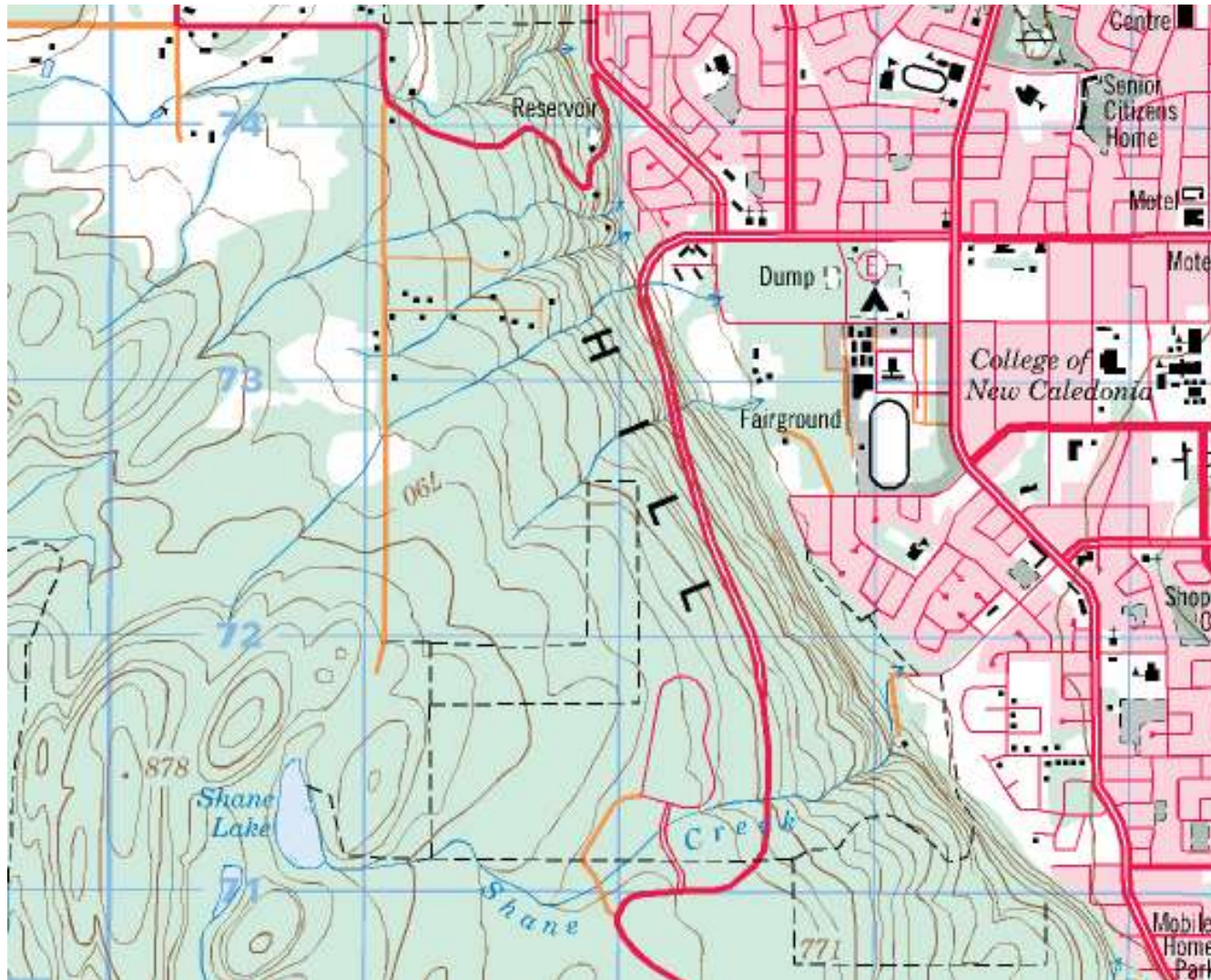
c. Colour (hue) : nominal / qualitative .. is used associatively

**Blue:** hydrography

**Brown:** contours

**Black:** standard

**Red:** important



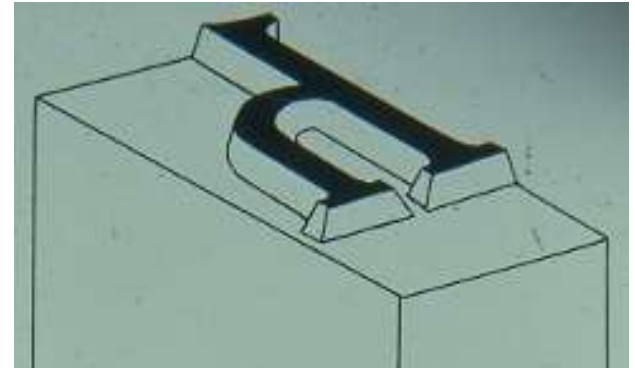
# Quantitative Visual Variables

a. **Size** : size denotes importance

It is commonly measured in 'points' (you knew this !)

72points = ~ 1" (inch)

minimum size = 6 points

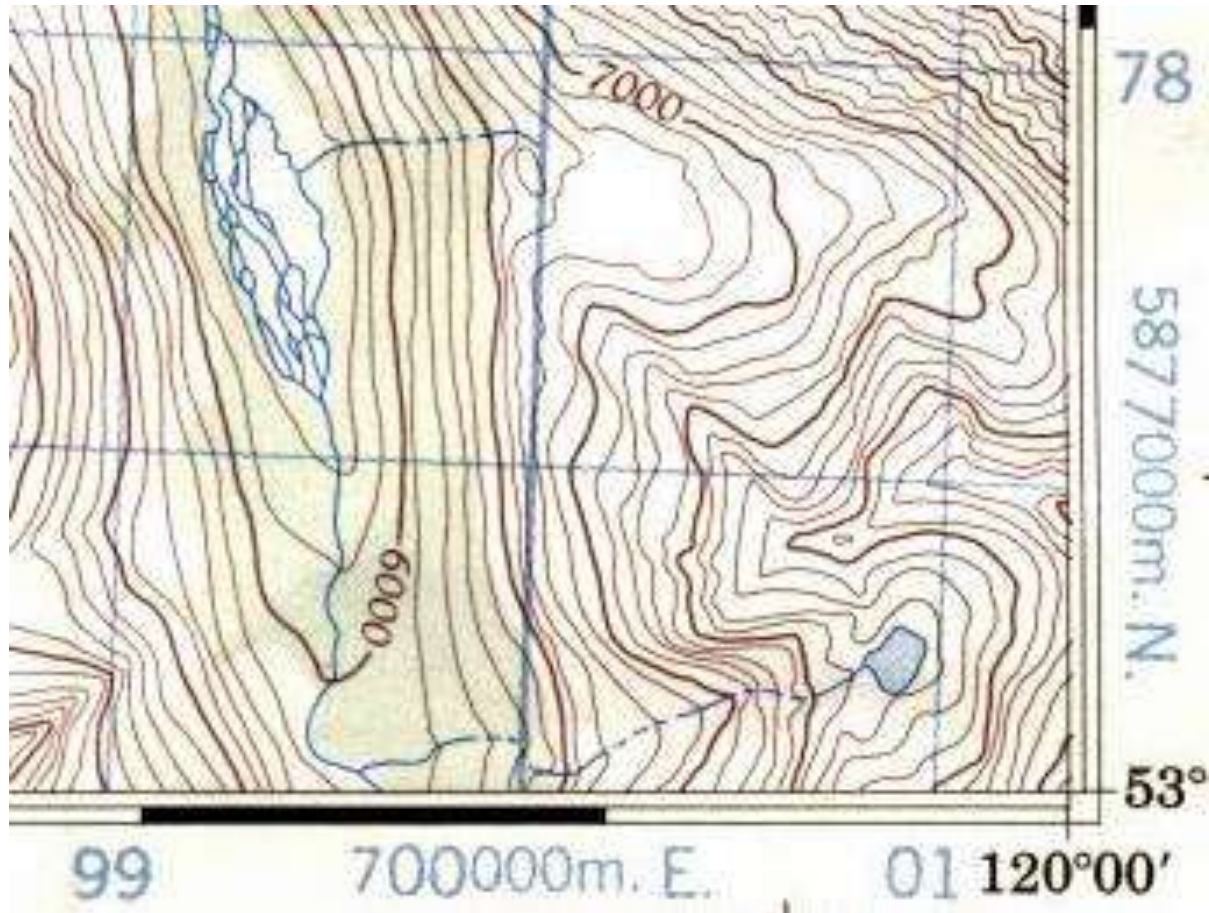


Larger size text is associated with larger or more important features (DUH!)

Large lettering should not be overpowering

Also: UPPER CASE and **Bold** imply some size/importance

**b. Tone / chroma (colour):** 'screened' lettering for background features (low saturation e.g. UTM digits)





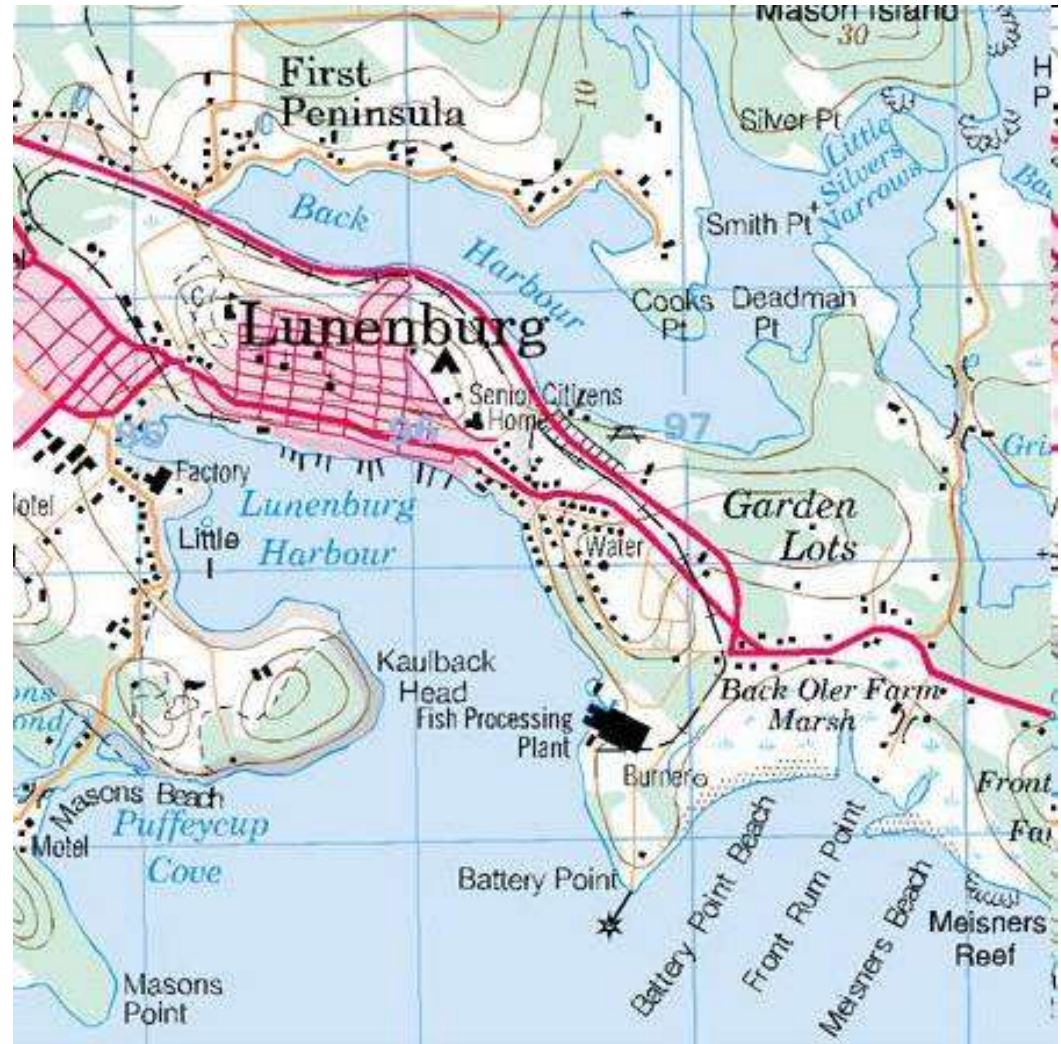
c. Form: bold or plain

e.g. **Vanderhoof** Vanderhoof

**Bold** implies  
prominence

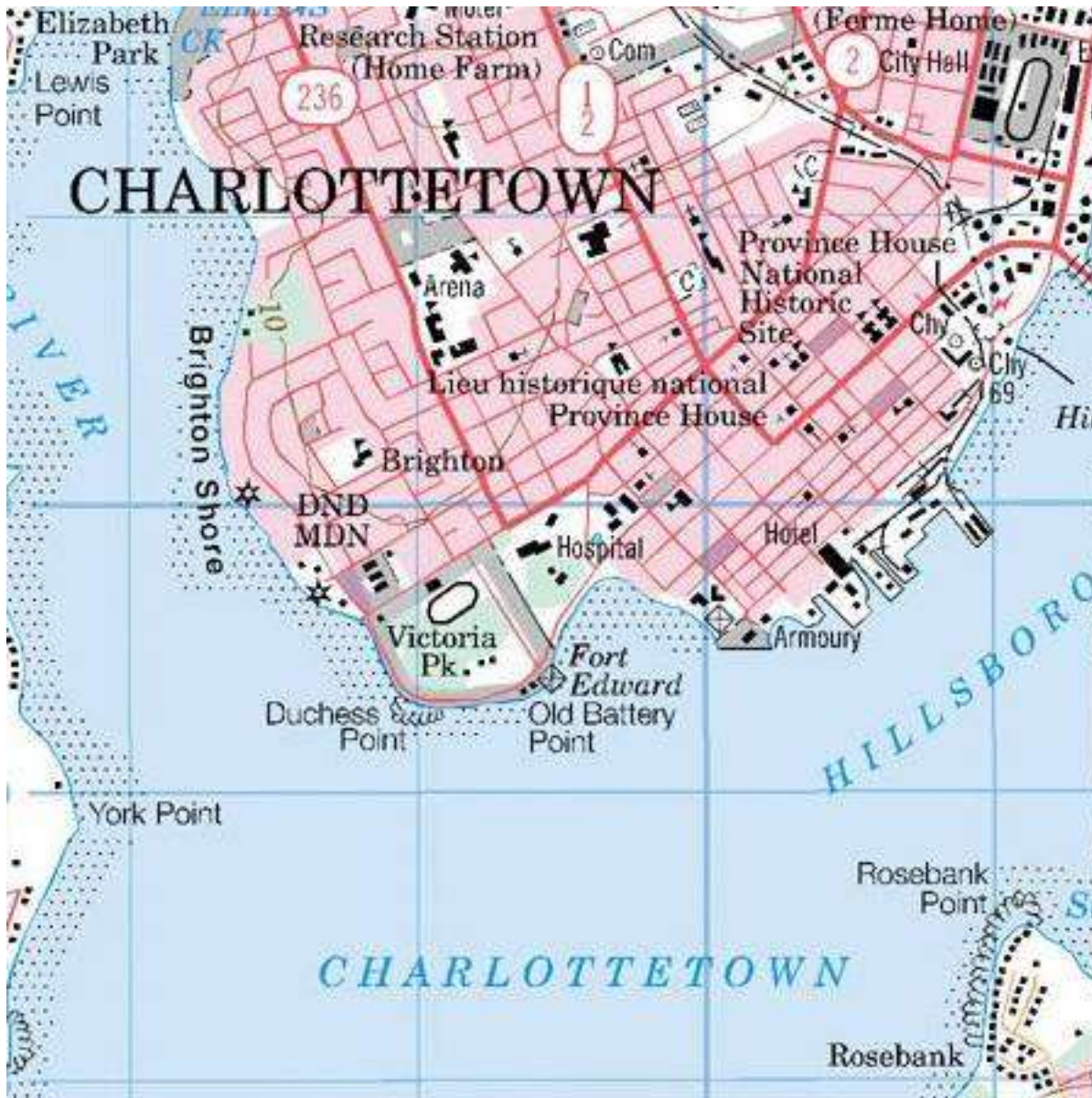
-its more visible

... useful on dark  
backgrounds





## d. (Form) UPPER or Lower case



UPPER CASE  
implies major  
features

PRINCE  
GEORGE

Prince George

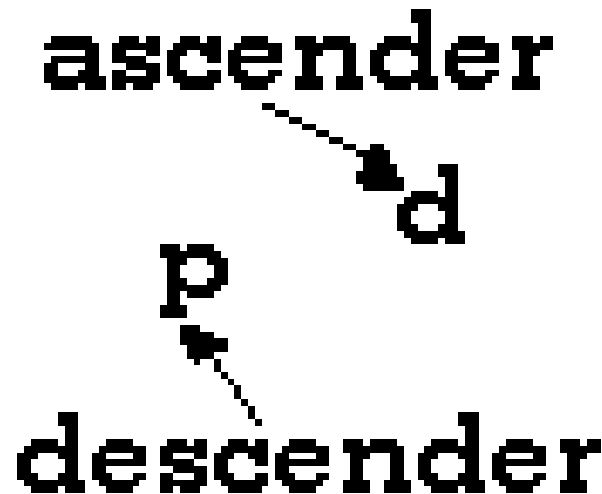
Use UPPER case  
sparingly - why ?

Why are map labels  
and books mostly in  
lower case ?

# Use UPPER case sparingly - why ?

... it takes up more space AND

.. it is (13%) less readable than lower case due to the extra information provided by 'ascenders' and 'descenders'



This is why we don't print books in UPPER Case and shouldn't use it in emails



(why are they called UPPER and lower 'case' ?)



Barkerville

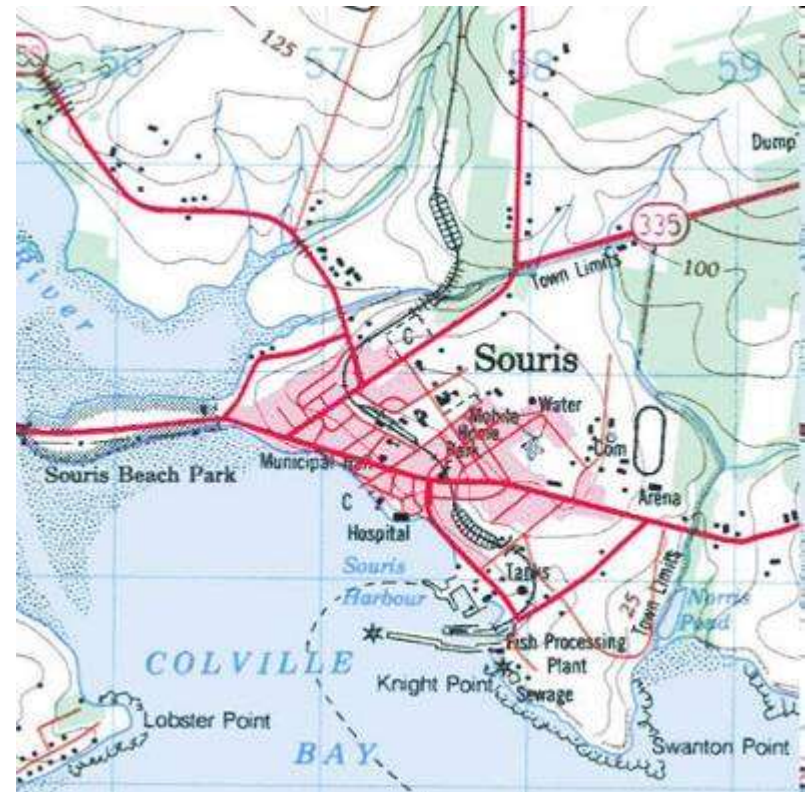
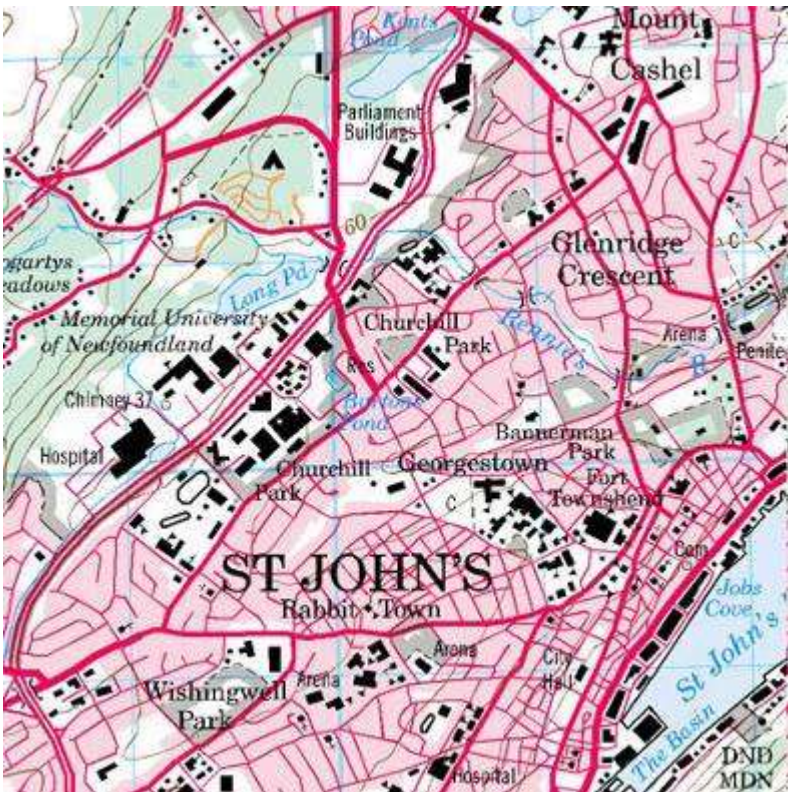


# Choice of combinations of variables

**Consistency:** lettering within a class should be the same (e.g. all major rivers)

**Contrast:** should be higher between major classes than within a class type

**Harmony:** avoid many type faces (fonts); use different forms instead



## 2. General rules of Positioning

Positioning is an **extra** visual variable that symbols don't have:  
- This can complicate digital mapping

General rules:

**A> Minimize ambiguity as to what the name refers to**

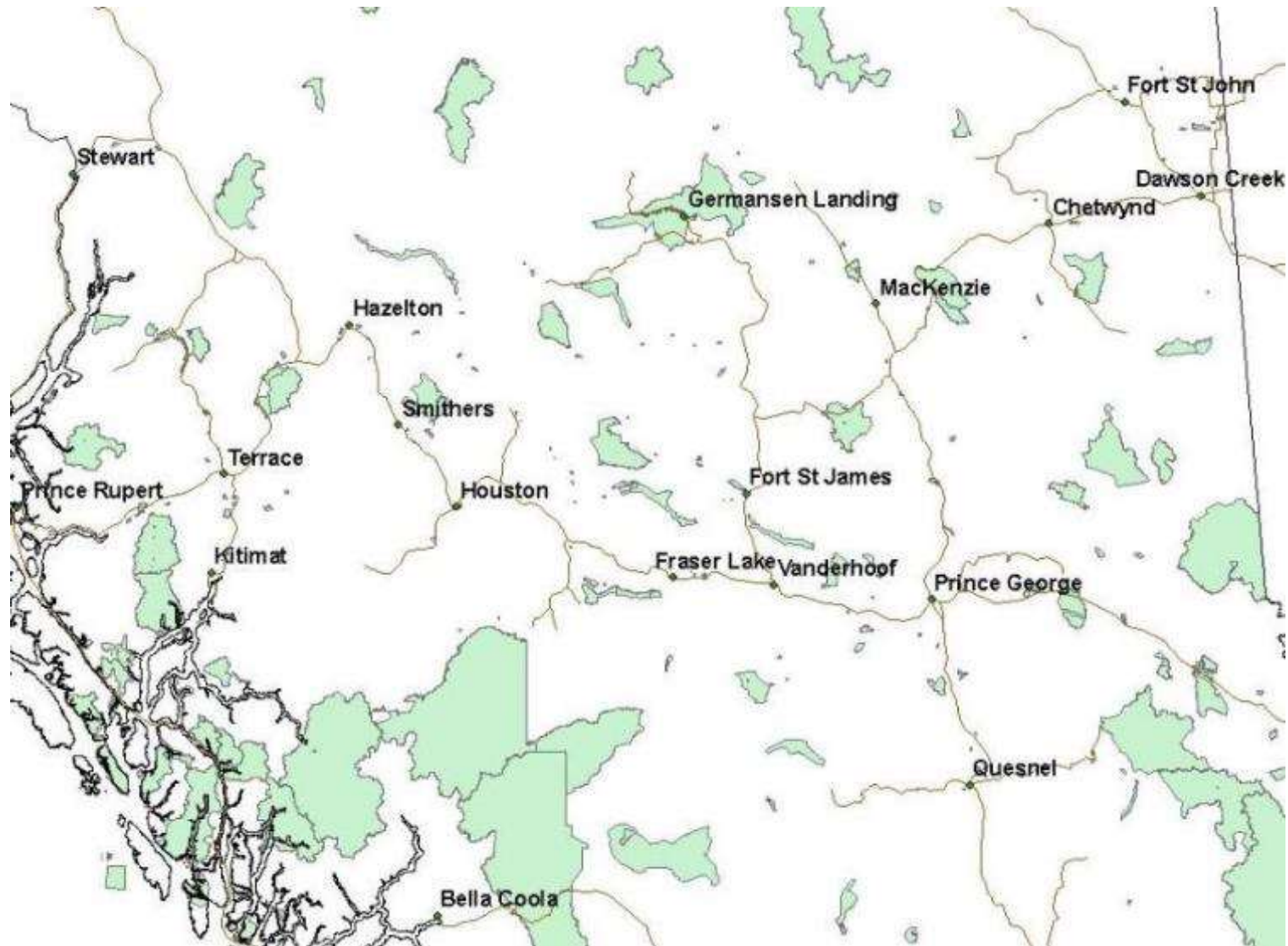
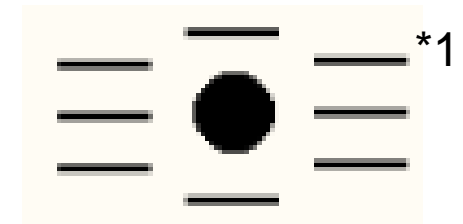
**B> Choose minimum interference with other map elements:**  
lettering is movable - symbols are not

**C> Horizontal lettering where possible, except:**  
..... if there is no space available (points) or  
.....feature is not horizontal (areas/lines)

**Points:** ArcGIS default, top right label position

There are 8 possible positions for names.

**Top right** is first default but try to be **consistent**





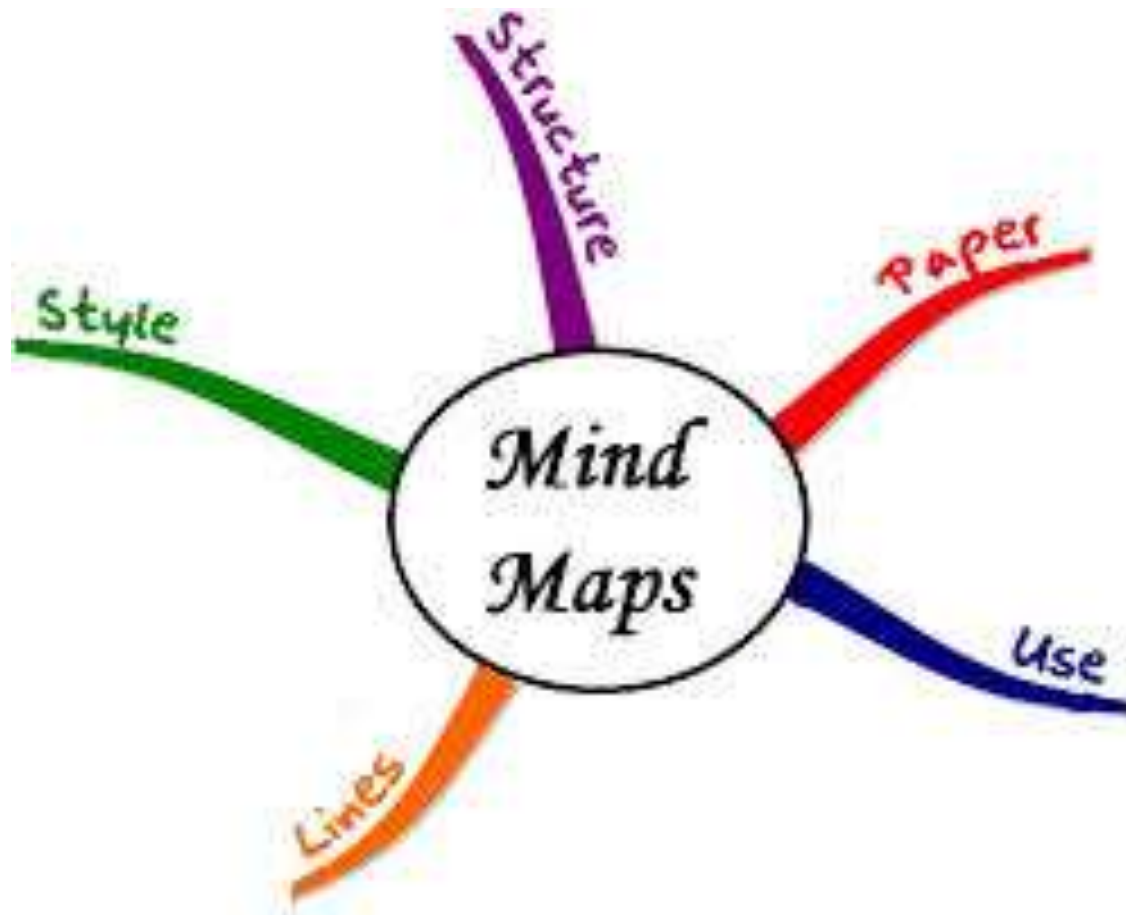
**OOPS ..... Fail !**



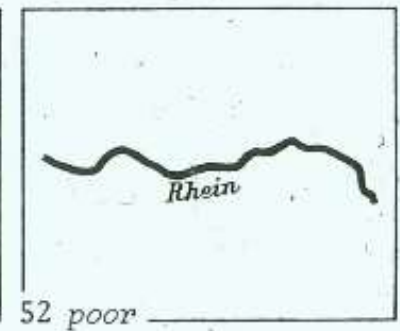
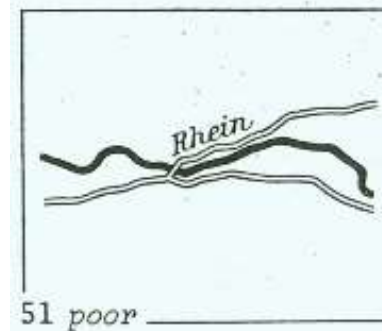
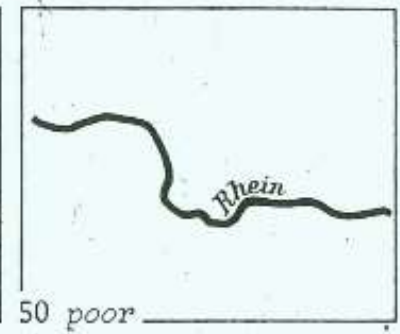
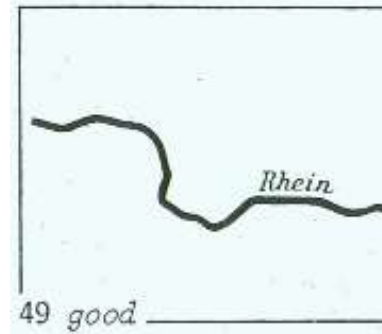
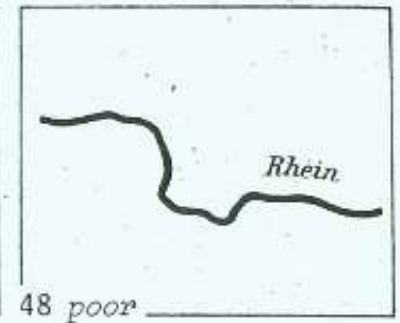
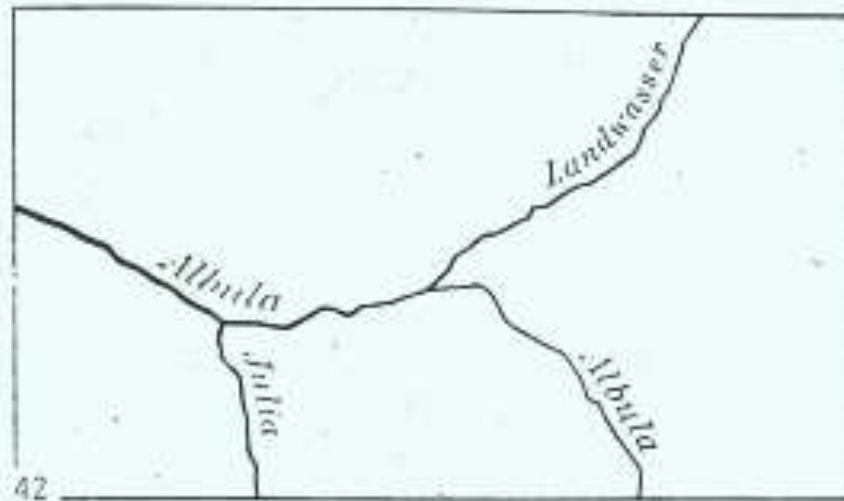


# Line symbols labels

- A> Follow the orientation of the line (river, road, etc.)
- B> Find a relatively straight piece to label
- C> Label above the line, far enough away so descenders don't cross it



# Line symbols labels



Examples from Eduard Imhof .... 'Swiss Guru'

Lettering should not be beyond the vertical ... the **only** exception (?) is contour lines, where lettering tops can 'point uphill' to show terrain form



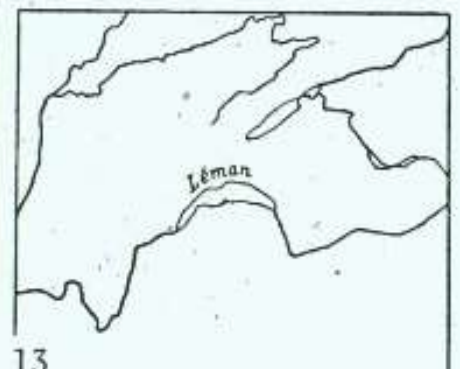
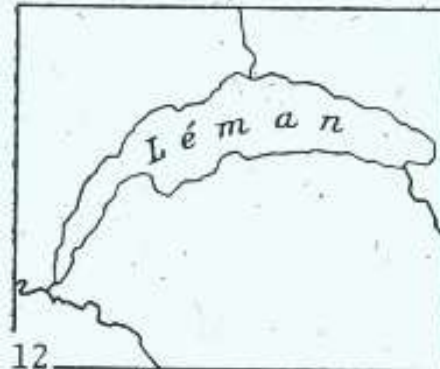
.... And never 'just a bit off vertical' which looks like an accident

# Area symbols

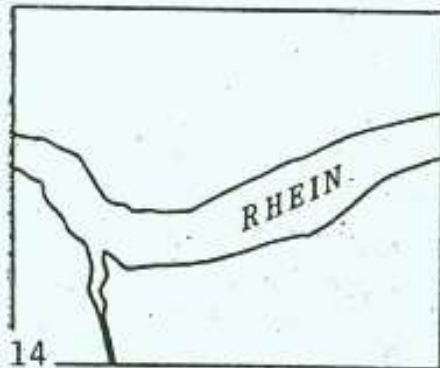
**A>** Lettering totally inside the area



**B>** If too small, label as if a point  
Name should fit inside with minimum  
1 letter width on either side



**C>** Orient lettering to fit area  
shape, curve as needed



**D>** Space lettering if area is large,  
but not  $> 4 \times$  letter height, evenly  
Serifs are useful in spaced names

Examples from Eduard Imhof



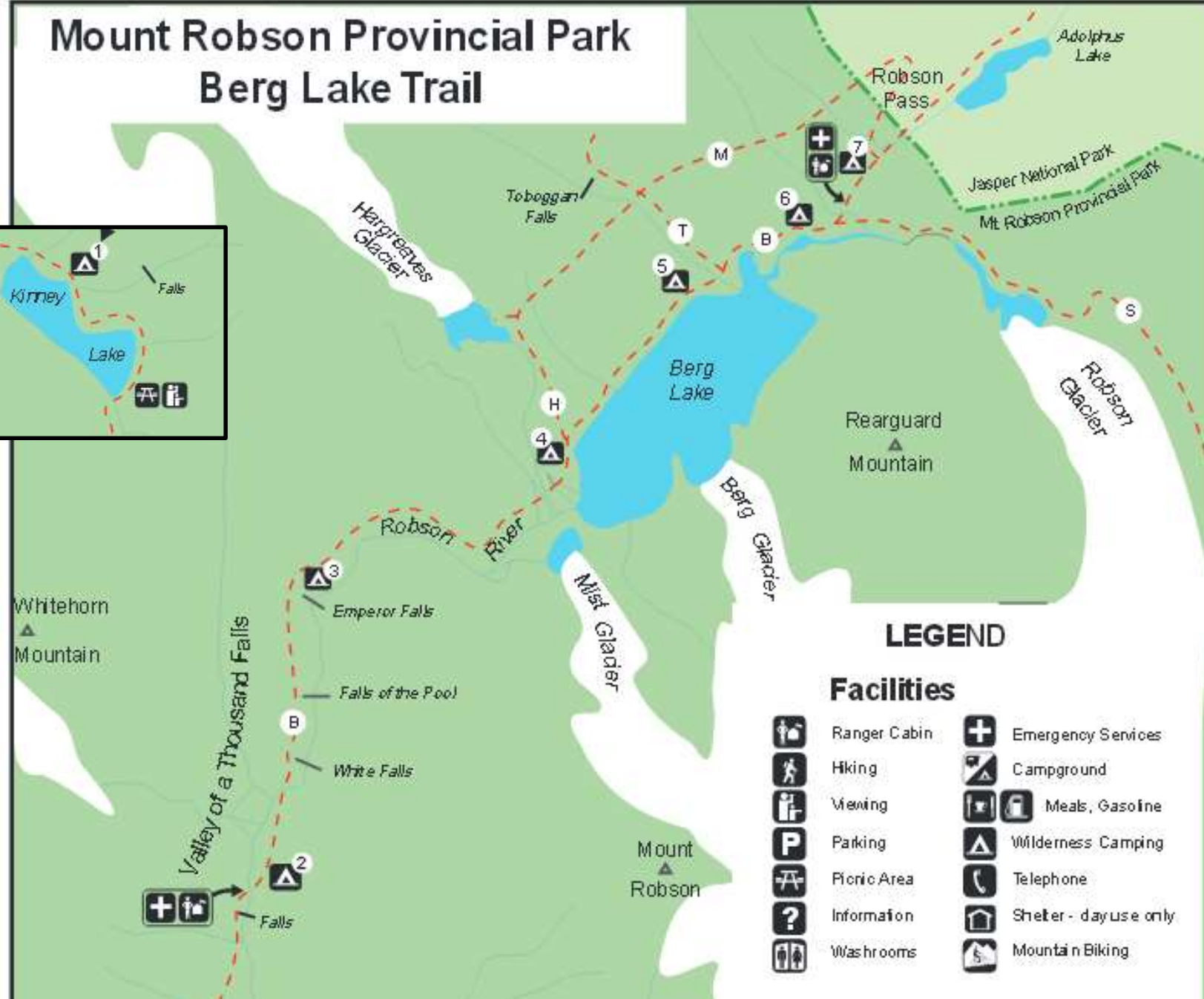


## Default arcGIS lettering

- All labels on one line
- Some duplicates
- Crossing other features
- **don't accept shabby defaults**

# Mount Robson Provincial Park

## Berg Lake Trail



### LEGEND

#### Facilities

	Ranger Cabin		Emergency Services
	Hiking		Campground
	Viewing		Meals, Gasoline
	Parking		Wilderness Camping
	Picnic Area		Telephone
	Information		Shelter - day use only
	Washrooms		Mountain Biking

# Summary - positioning

## Points

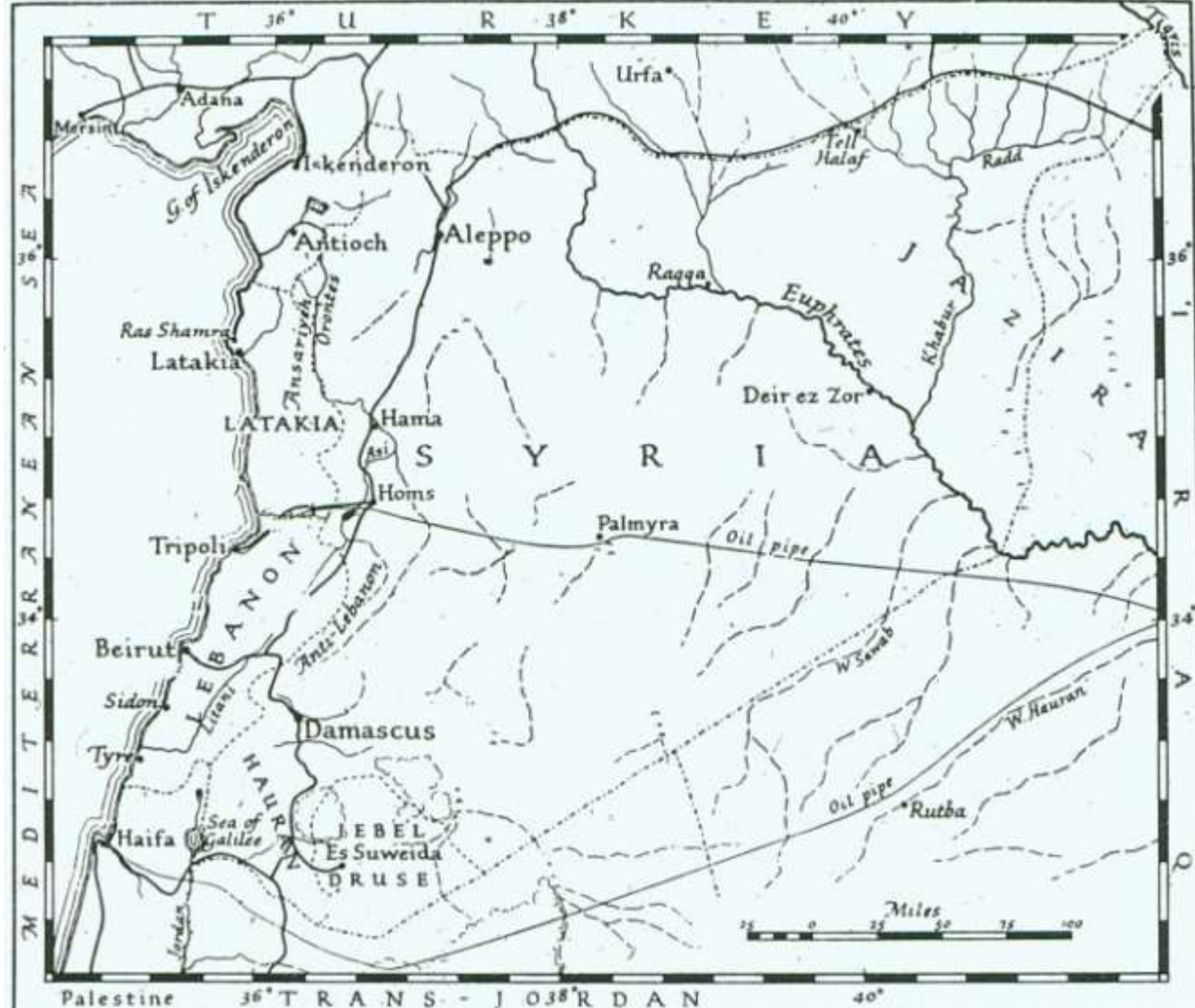
horizontal, close to the point

## Lines

along/above line

## Areas

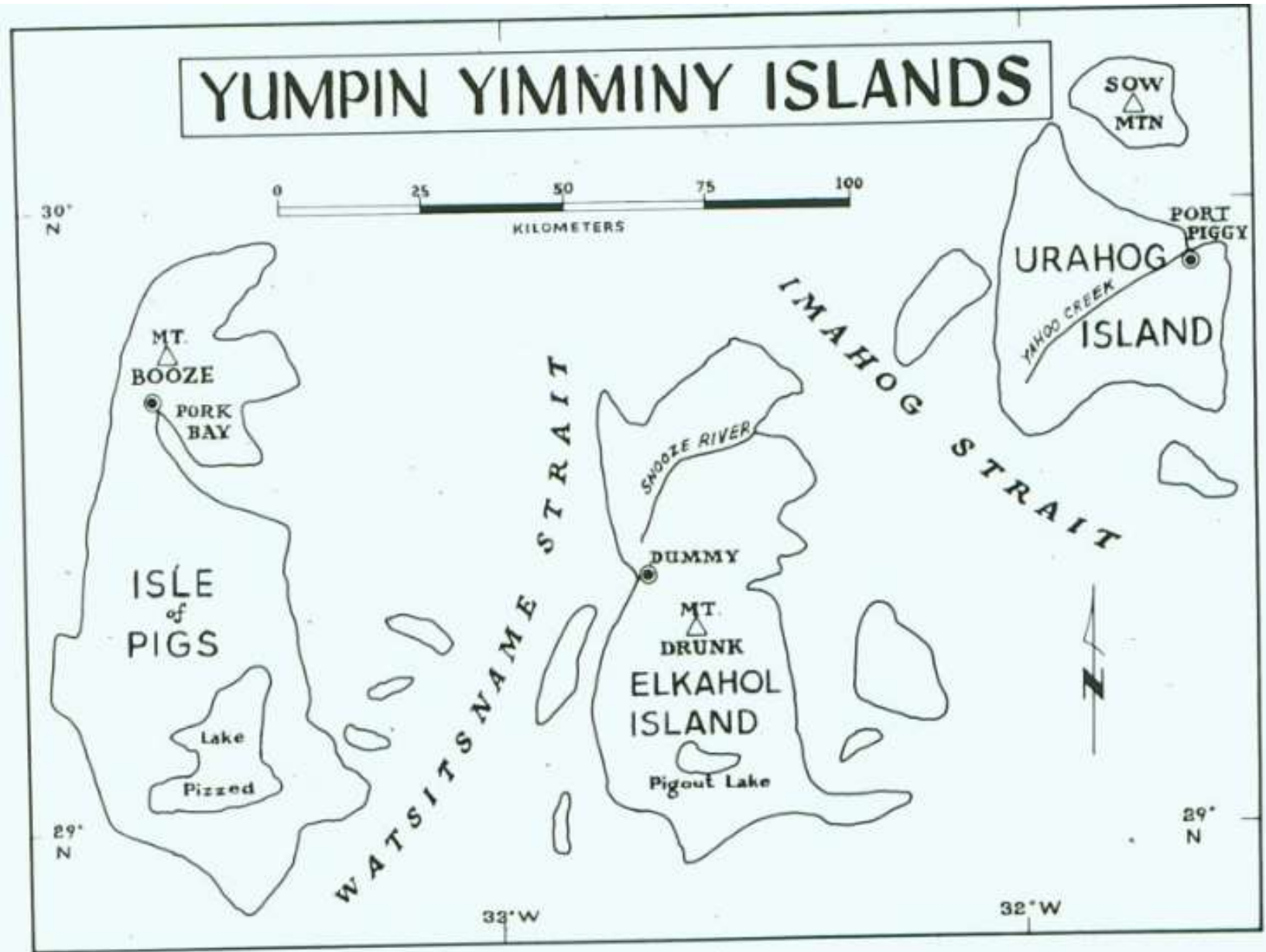
centred, showing orientation



Excellent example of hand lettering



# Handlettering exercise - consistent classes with contrast



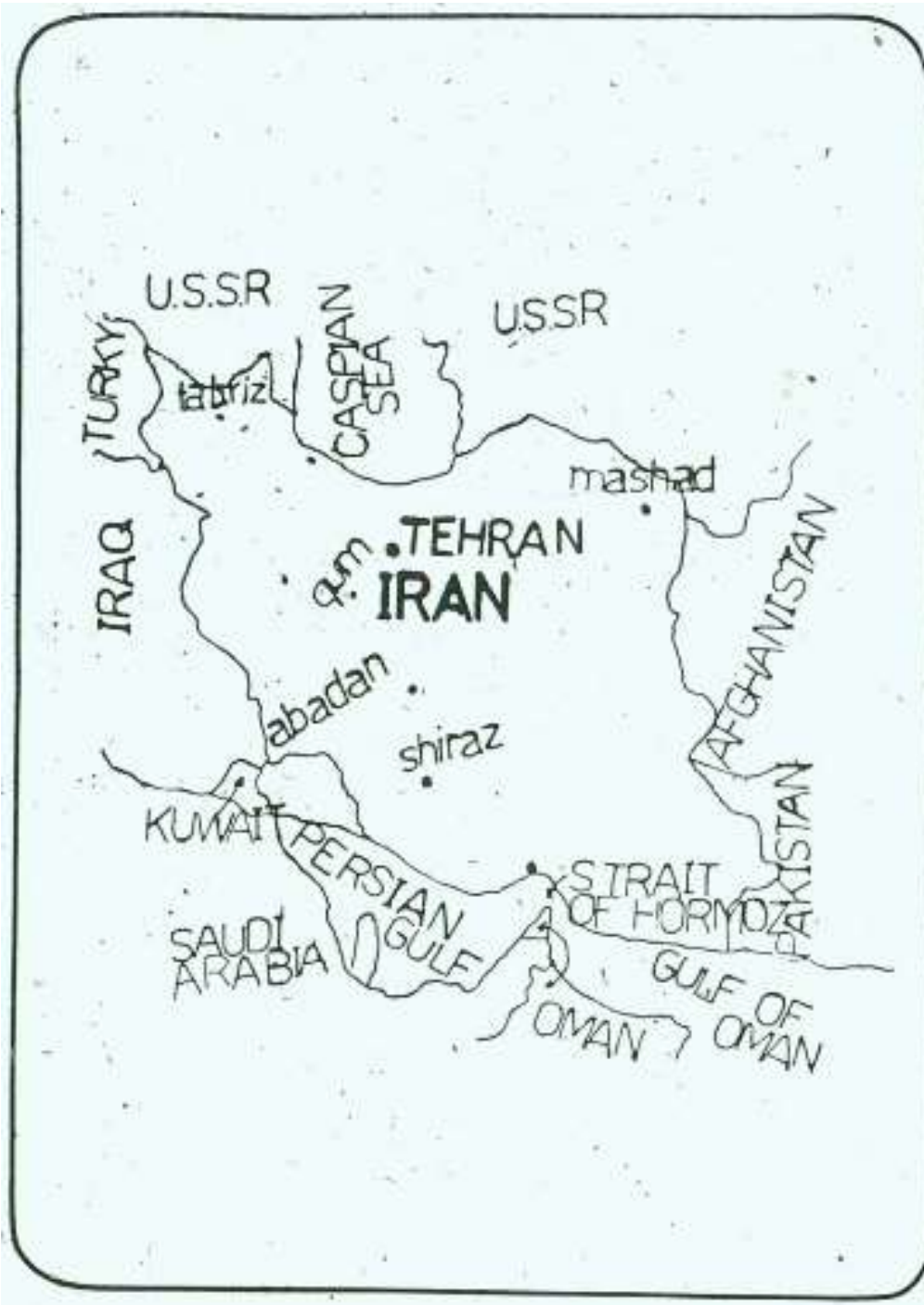
1978

(Iran hostage crisis)

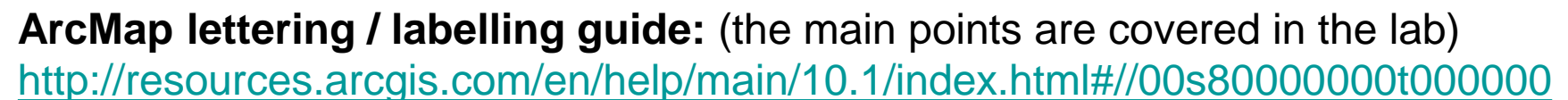
What went wrong?

What went right ?

Murphy's Law proven



Lettering is like a hockey/soccer referee - if he doesn't make any mistakes, you don't notice him



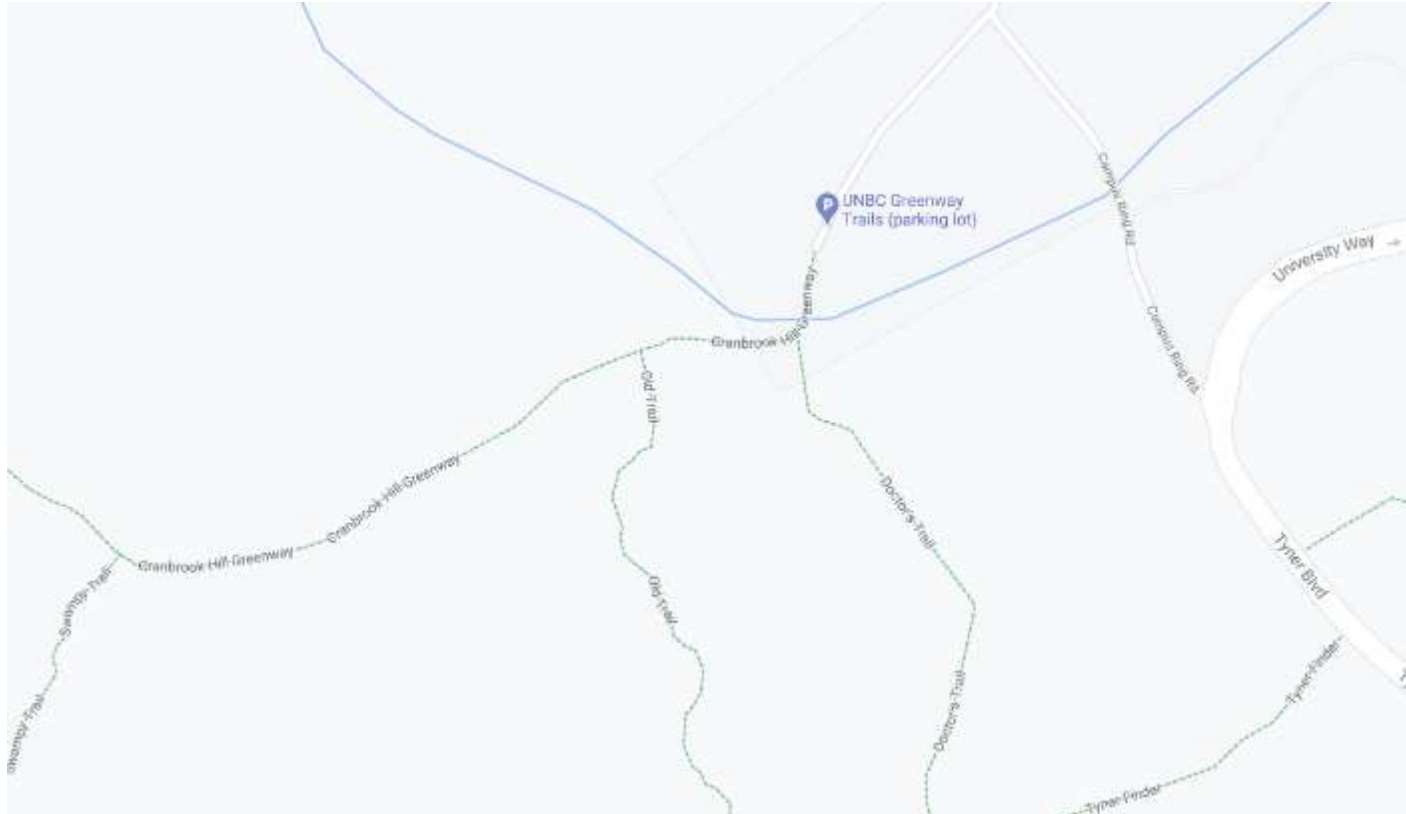


## ArcGIS lettering / labelling guide:

<http://resources.arcgis.com/en/help/main/10.1/index.html#//00s80000000t000000>

(the main points are covered in the labs)

[https://en.wikipedia.org/wiki/Typography\\_\(cartography\)](https://en.wikipedia.org/wiki/Typography_(cartography))



**How to get a feature named after yourself - Google map naming (New Zealand) :**

<http://www.youtube.com/watch?v=geOzPsitjJE>