ORGANIZATION OF MAP ELEMENTS

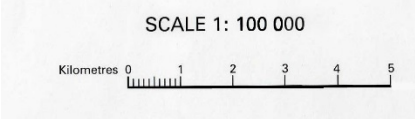
Map Elements

How many of them can you name?

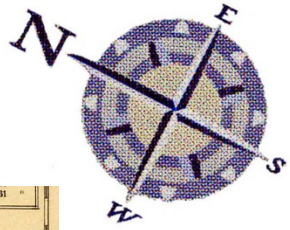
Map Elements

- title (subtitle)
- legend
- scale
- inset map
- credit note
- date
- logo
- mapped (unmapped) area
- borders - neatlines
- graticules - grids
- map symbols
- labels
- direction (north arrow)

Map Elements



The elements used in your map, and their location and style, will vary depending upon the audience and message.



Map Elements

- **Title** (subtitle)
- legend
- scale
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- labels
- direction (north arrow)

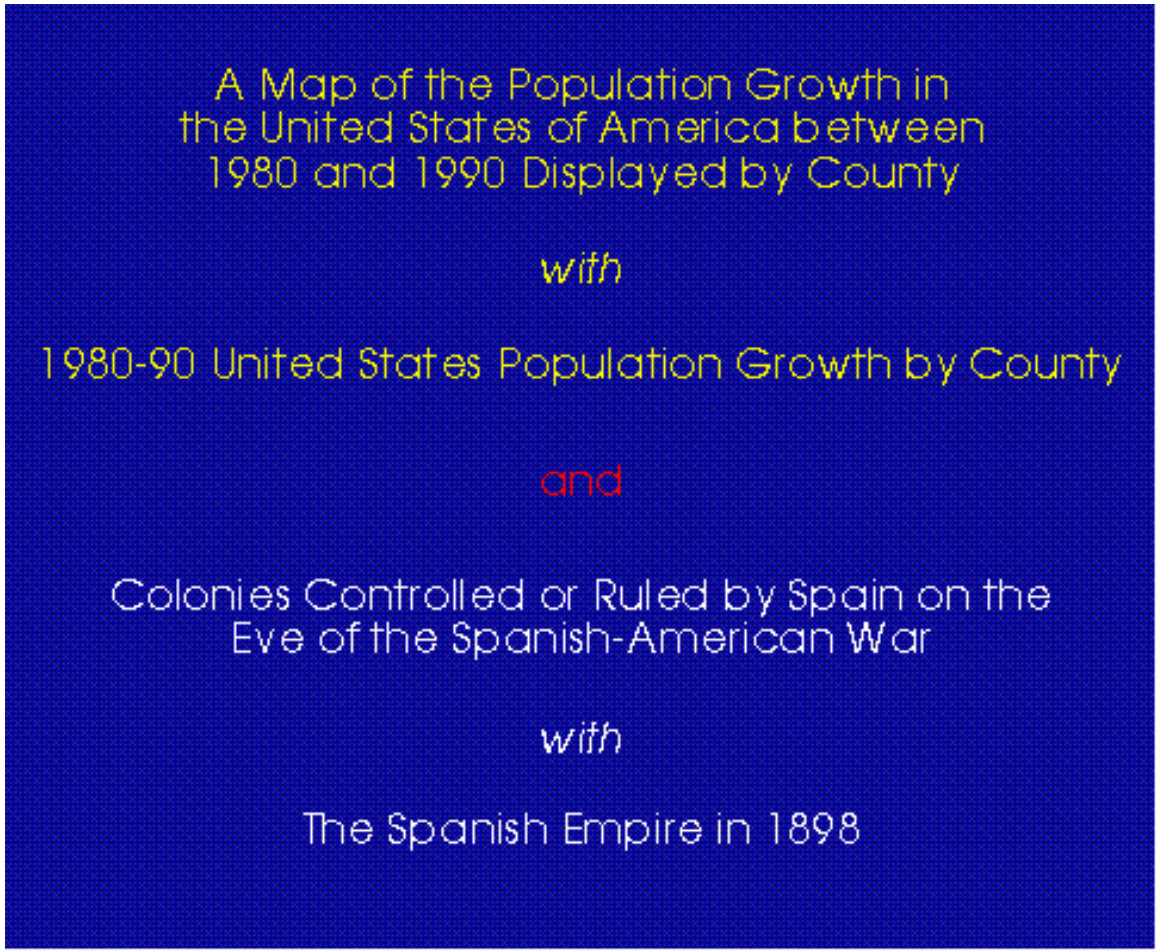
Map Elements

Title

- Explain Purpose of the Map *… the What, Where, When, etc.*
- Simplify ... Be Concise.
- Draw Attention to your Title
  - Explore your Font Library
  - Be Creative!

Map Elements

Title - Simplified



Map Elements

Title – Fonts

Think “graphically” when choosing the font style for your title. It should complement the map

… Old map, old font

… Fun map, fun font

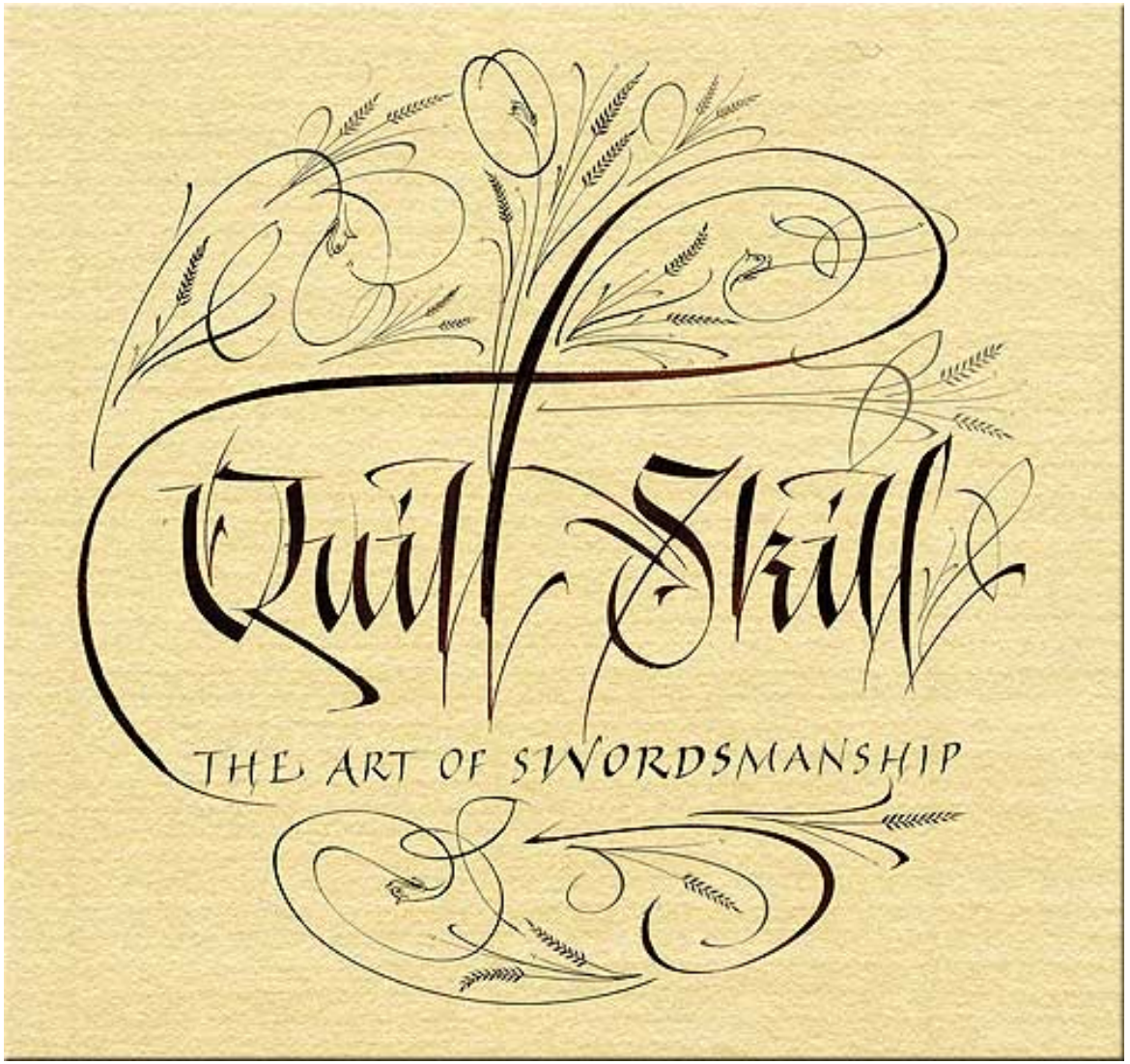
… Technical map, straight-laced, no nonsense font.

Map Elements

Title – Use Subtitles to Further Explain Map Data

Map Elements

Title – Be Creative … Try Cool Fonts

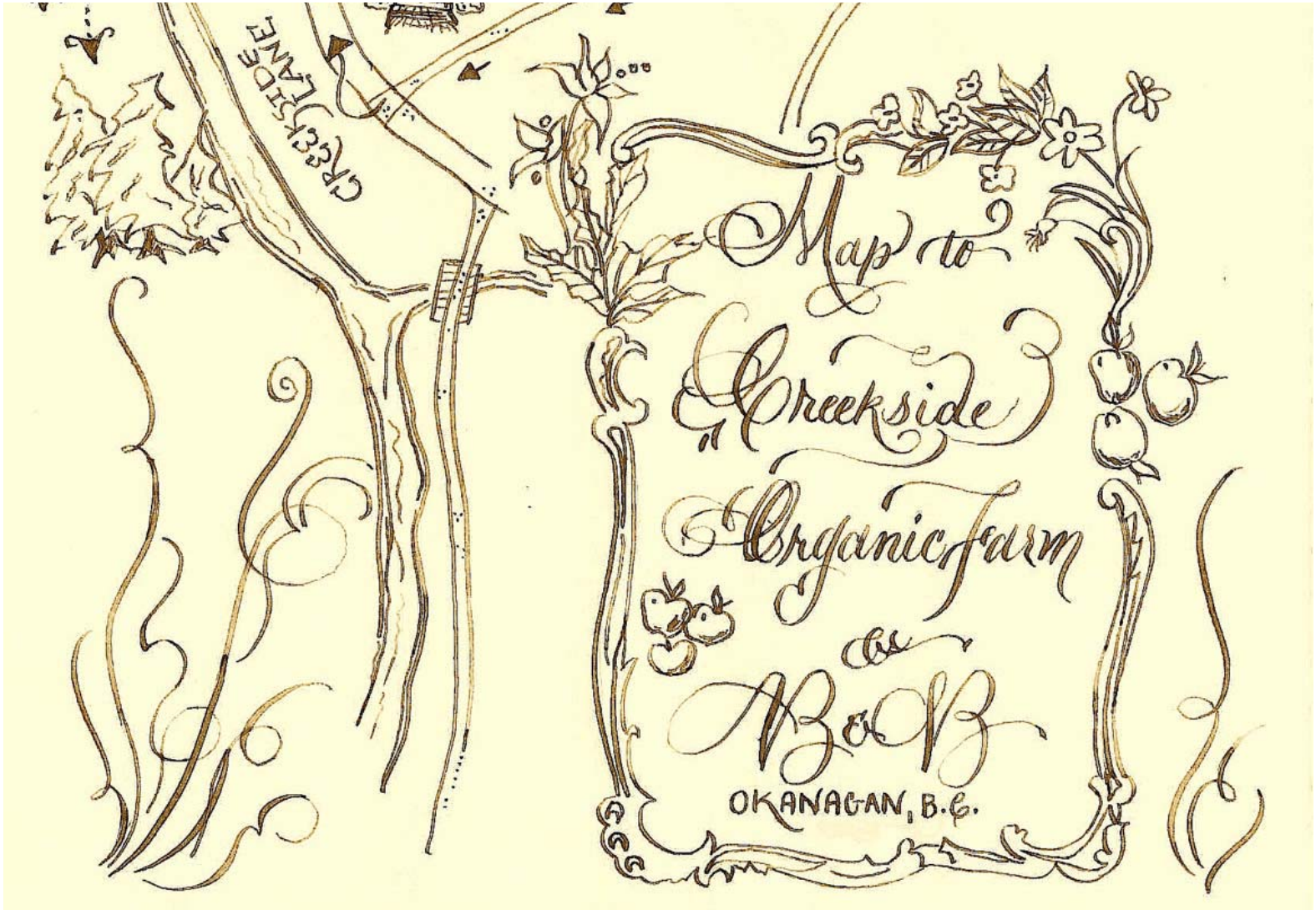


Map Elements

Title – Be Creative … Explore Cool Fonts

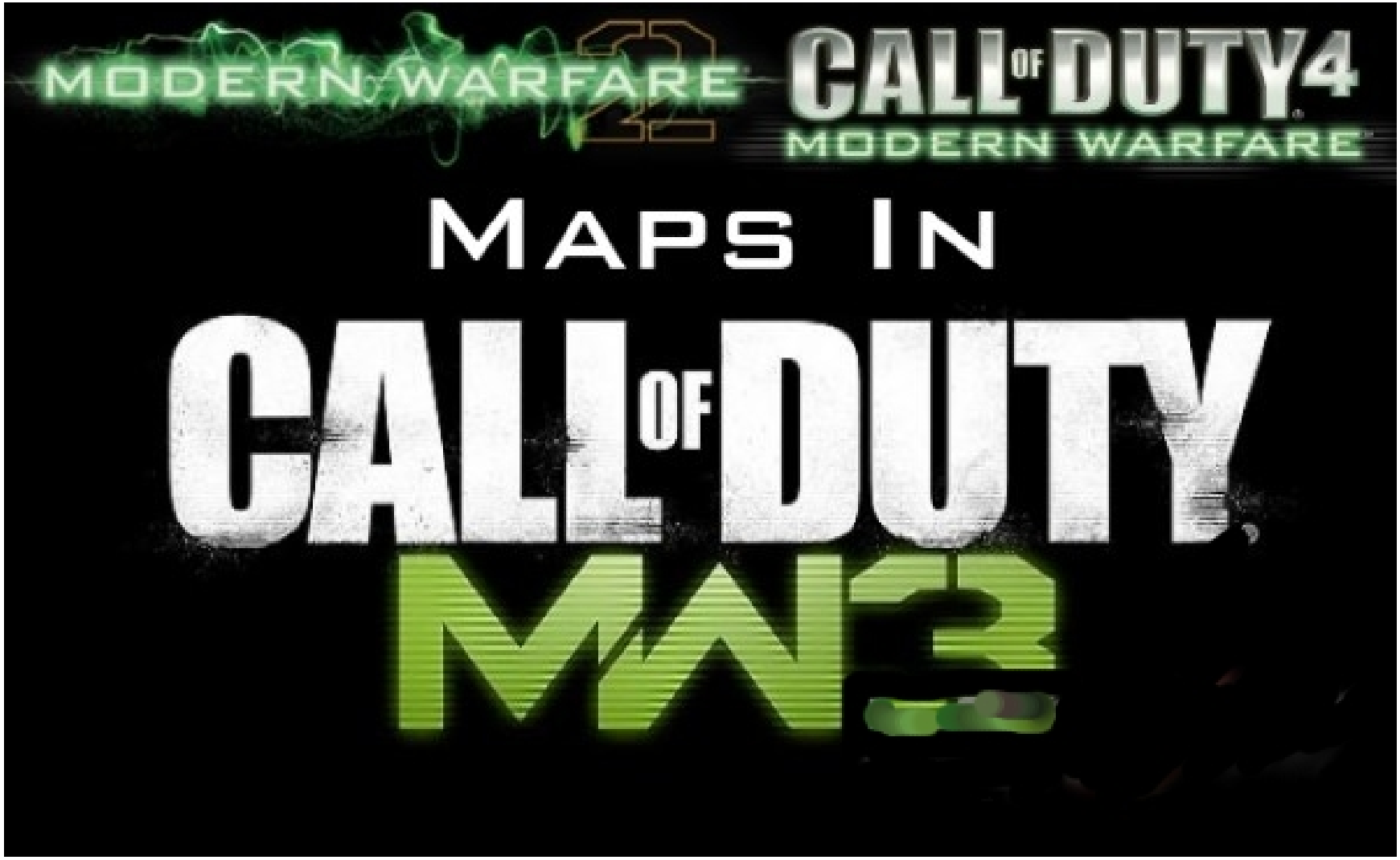
Map Elements

Title – Be Creative … Explore Cool Fonts



Map Elements

Title – Design to **GRAB ATTENTION**



Map Elements

- title (subtitle)
- **Legend**
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- graticules - grids
- map symbols
- labels
- direction (north arrow)

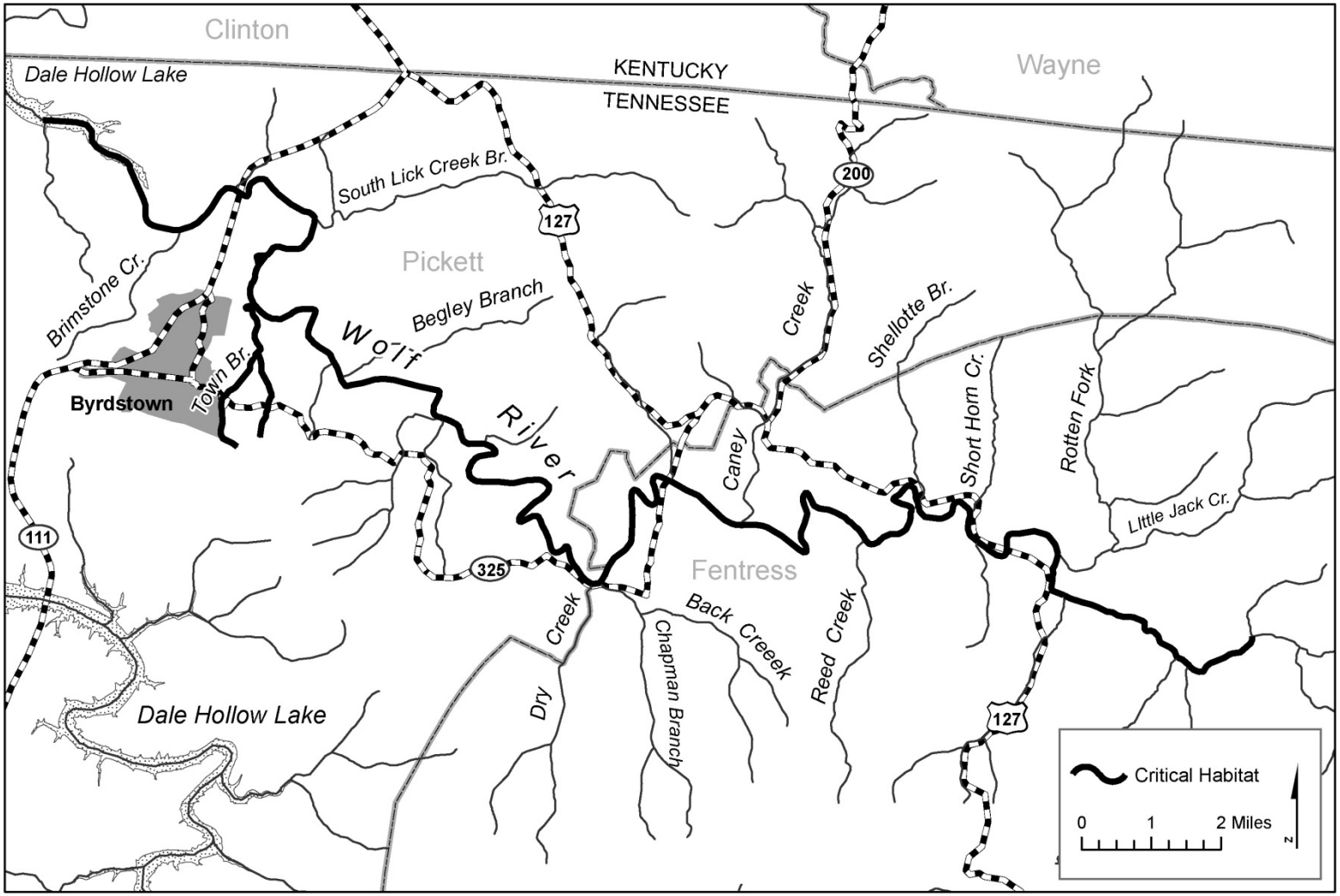
Map Elements

Legend

"On maps depicting the natural environment, the extent to which a legend is needed is an indication of the degree of ***failure*** *of the cartographer."* *(Shelton)*

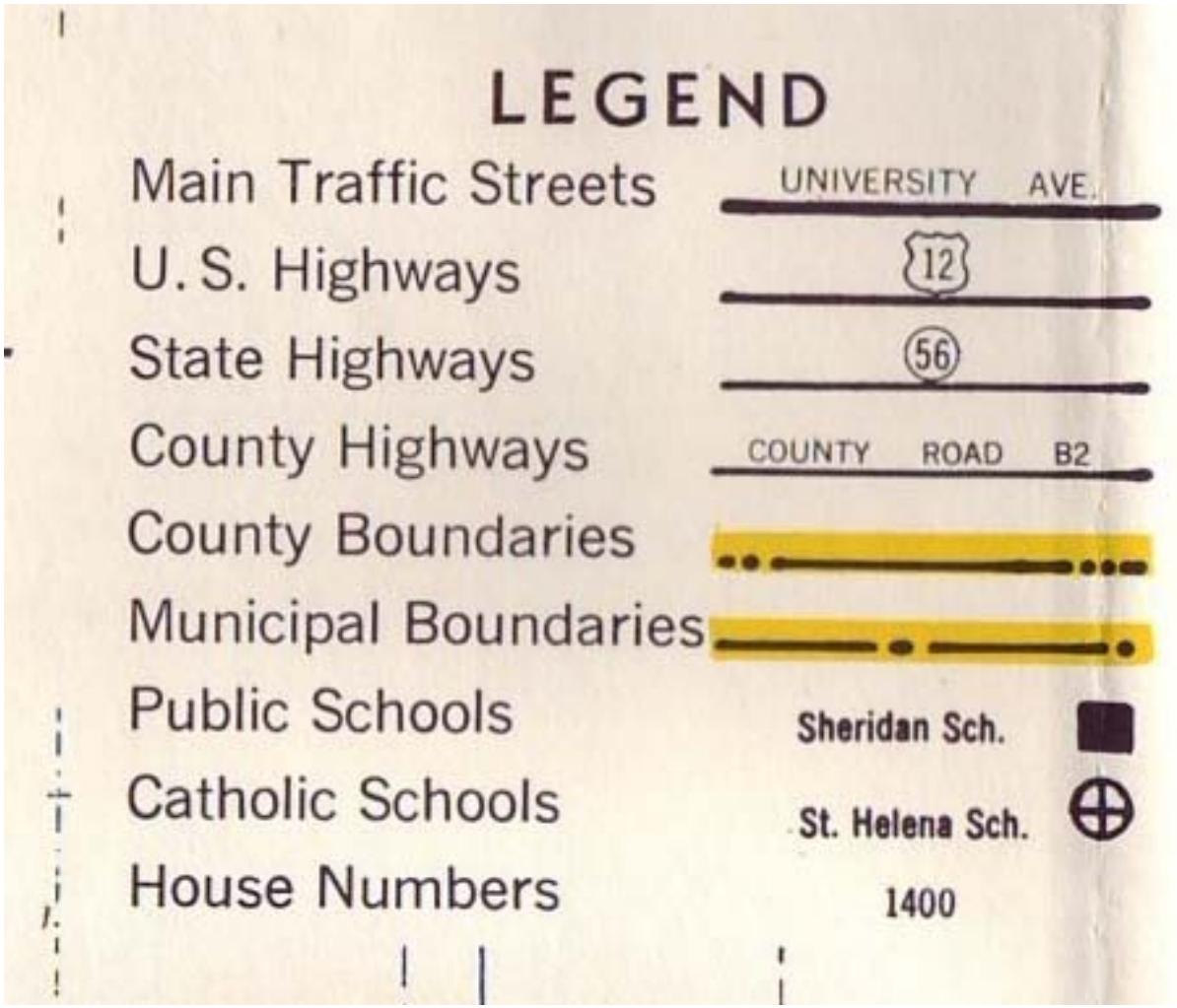
Map Elements - *Legend*

Map of Wolf River Unit of critical habitat for the fluted kidneyshell



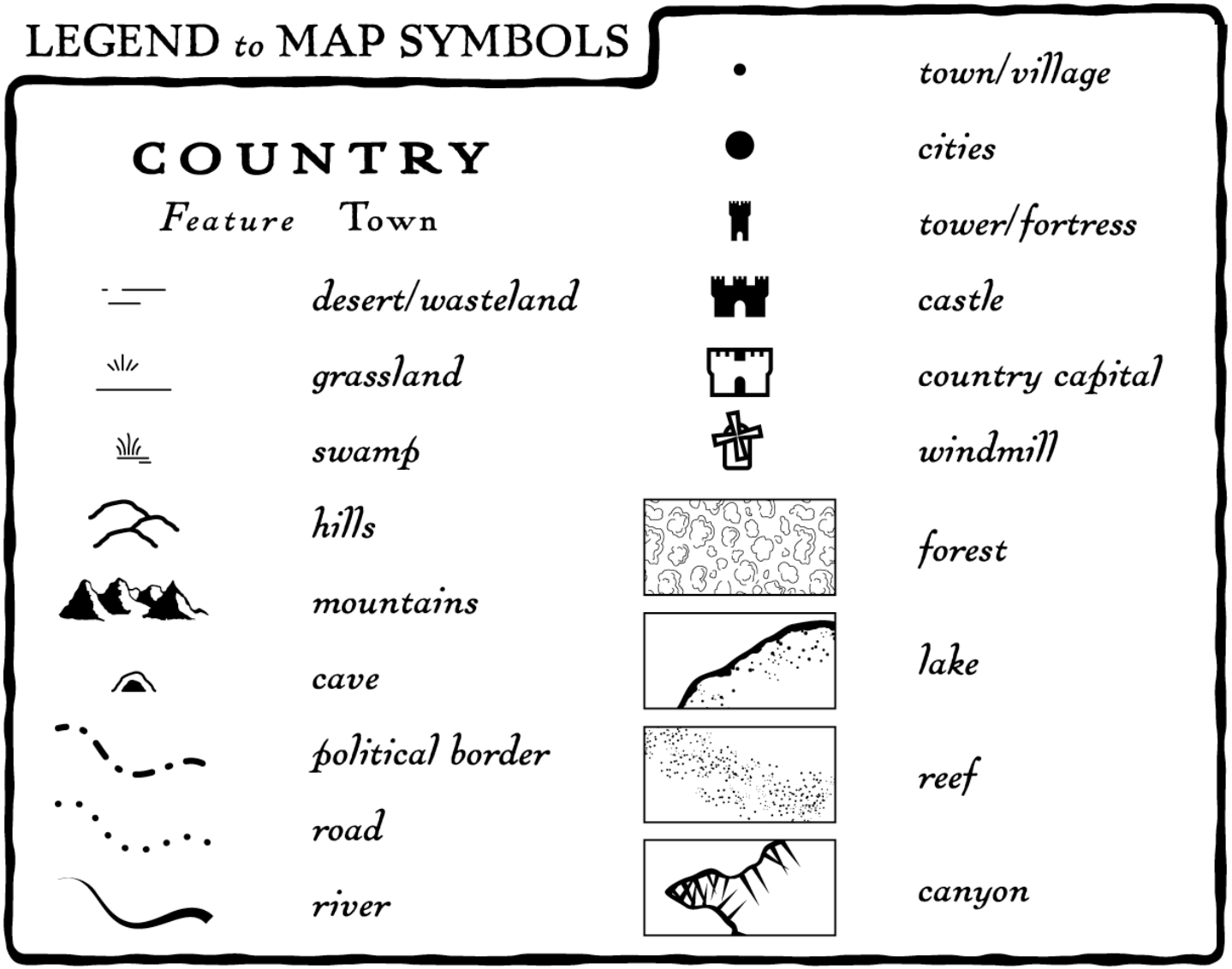
This map is provided for illustrative purposes of critical habitat only. For precise legal definition of critical habitat, please refer to the narrative unit descriptions.

Map Elements - *Legend*



Map Elements - *Legend*

Map Elements - *Legend*



Map Elements

- title (subtitle)
- legend
- **Scale**
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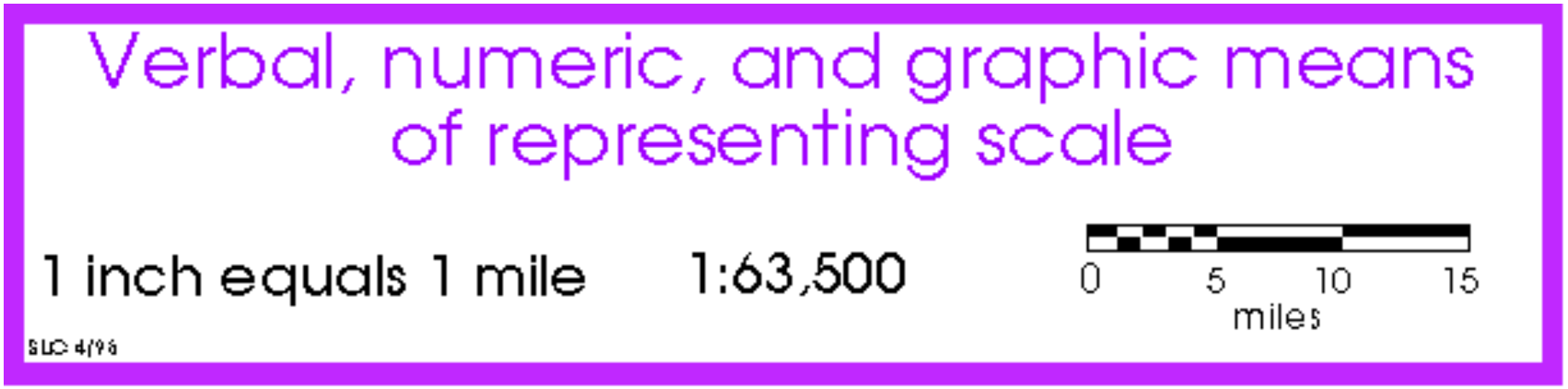
- credit note
- date
- logo
- mapped (unmapped) area
- borders - neatlines
- graticules - grids
- map symbols
- labels
- direction (north arrow)

Map Elements

Scale

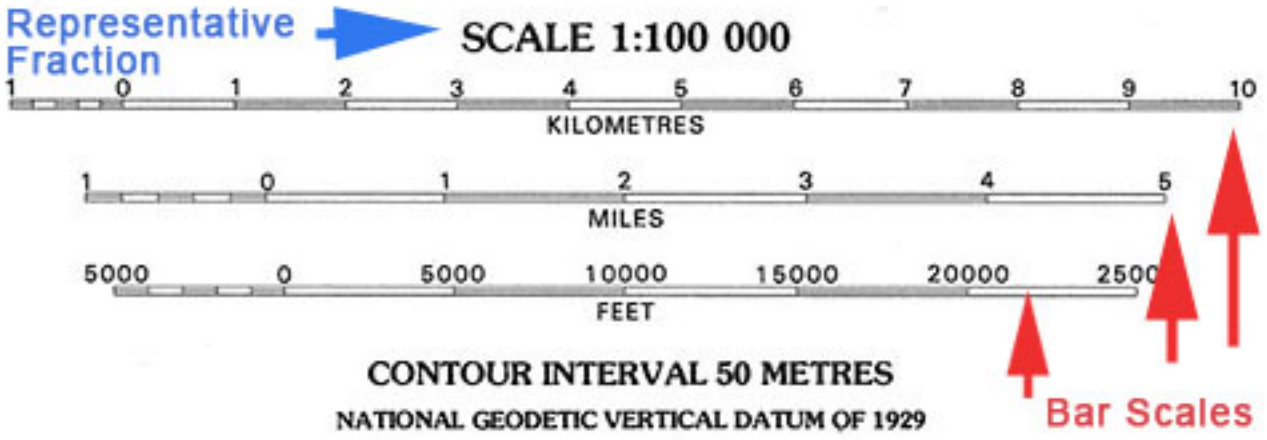
Scale : the relationship between the “Real World” and the map.



Verbal, Representative Fraction, Bar

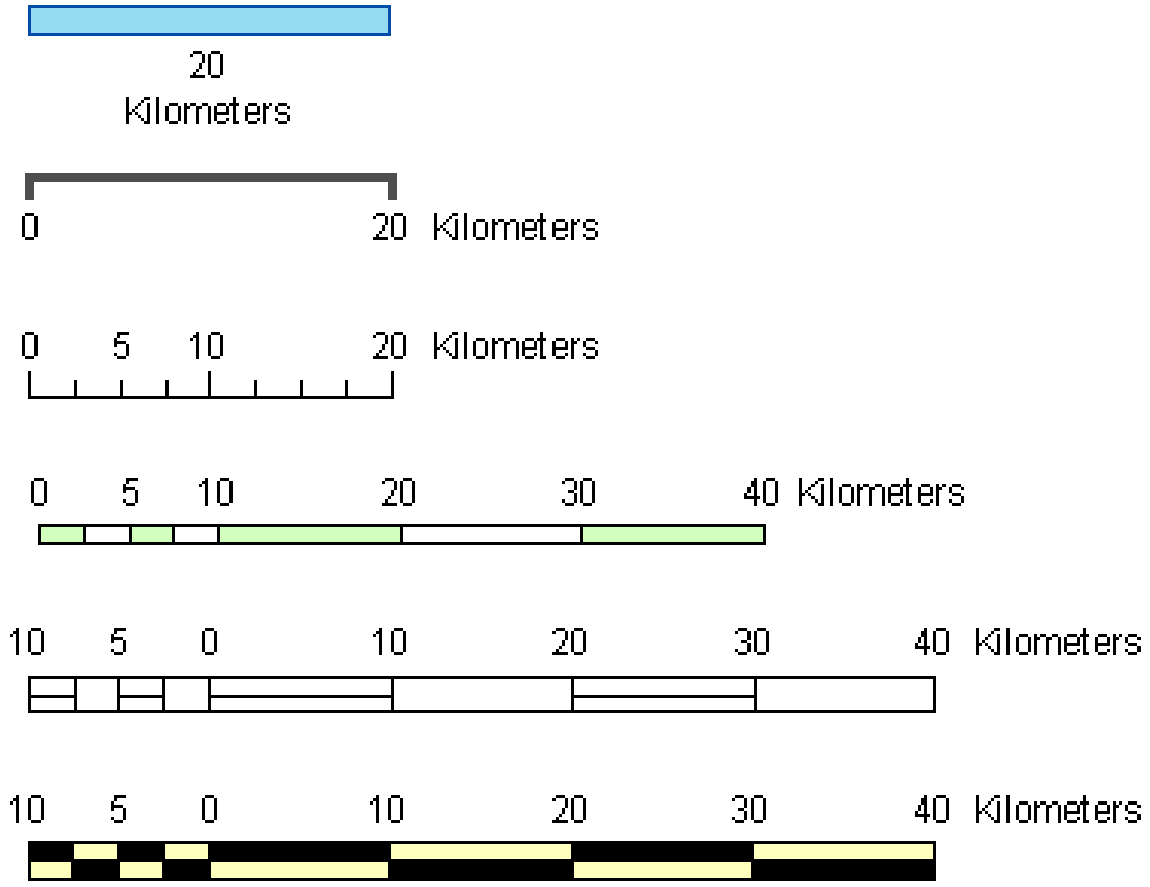
Map Elements

Scale



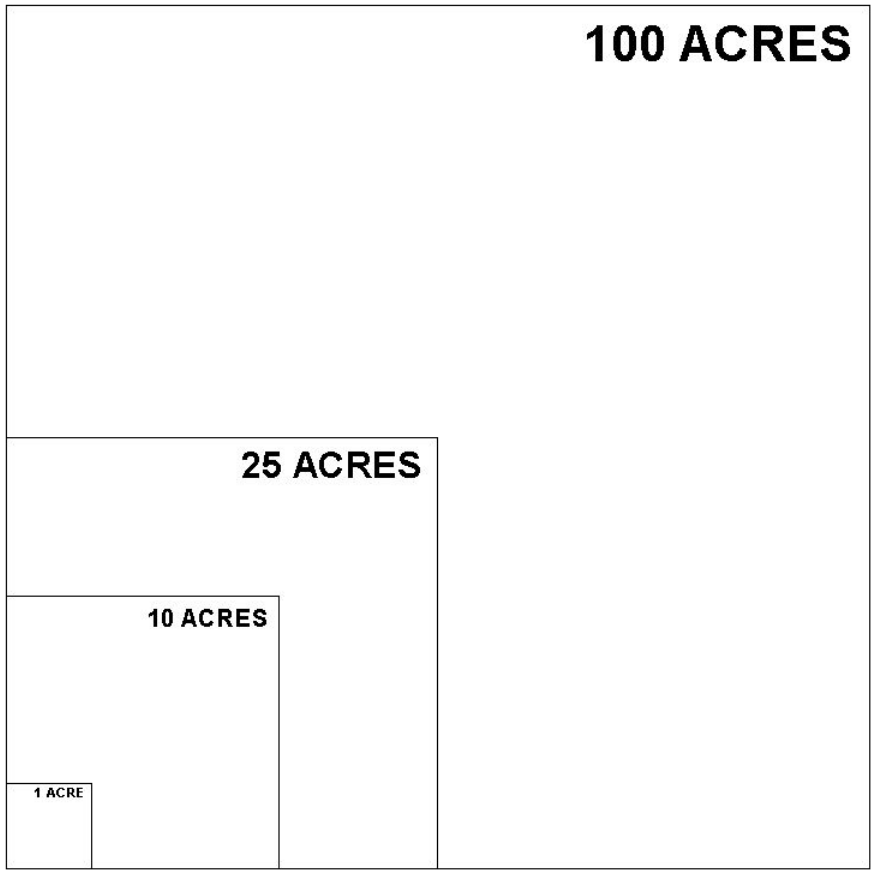
Map Elements

How do Scale Bars fit into Map Design?



Map Elements

Area Scales



Map Elements

Map Scale – Sweet Spots

Map Scale	1/40 inch represents	1 inch represents	1 centimeter represents	1 mile is represented by	1 kilometer is represented by
1:2,000	4.200 ft	56.000 yd	20.000 m	31.680 in	50.00 cm
1:5,000	10.425 ft	139.000 yd	50.000 m	12.670 in	20.00 cm
1:10,000	6.952 yd	0.158 mi	0.100 km	6.340 in	10.00 cm
1:15,840	11.000 yd	0.250 mi	0.156 km	4.000 in	6.25 cm
1:20,000	13.904 yd	0.316 mi	0.200 km	3.170 in	5.00 cm
1:24,000	16.676 yd	0.379 mi	0.240 km	2.640 in	4.17 cm
1:25,000	17.380 yd	0.395 mi	0.250 km	2.530 in	4.00 cm
1:31,680	22.000 yd	0.500 mi	0.317 km	2.000 in	3.16 cm
1:50,000	34.716 yd	0.789 mi	0.500 km	1.270 in	2.00 cm
1:62,500	43.384 yd	0.986 mi	0.625 km	1.014 in	1.60 cm
1:63,360	0.025 mi	1.000 mi	0.634 km	1.000 in	1.58 cm
1:75,000	0.030 mi	1.180 mi	0.750 km	0.845 in	1.33 cm
1:80,000	0.032 mi	1.260 mi	0.800 km	0.792 in	1.25 cm
1:100,000	0.040 mi	1.580 mi	1.000 km	0.634 in	1.00 cm
1:125,000	0.050 mi	1.970 mi	1.250 km	0.507 in	8.00 mm
1:250,000	0.099 mi	3.950 mi	2.500 km	0.253 in	4.00 mm
1:500,000	0.197 mi	7.890 mi	5.000 km	0.127 in	2.00 mm
1:1,000,000	0.395 mi	15.780 mi	10.000 km	0.063 in	1.00 mm

Map Elements

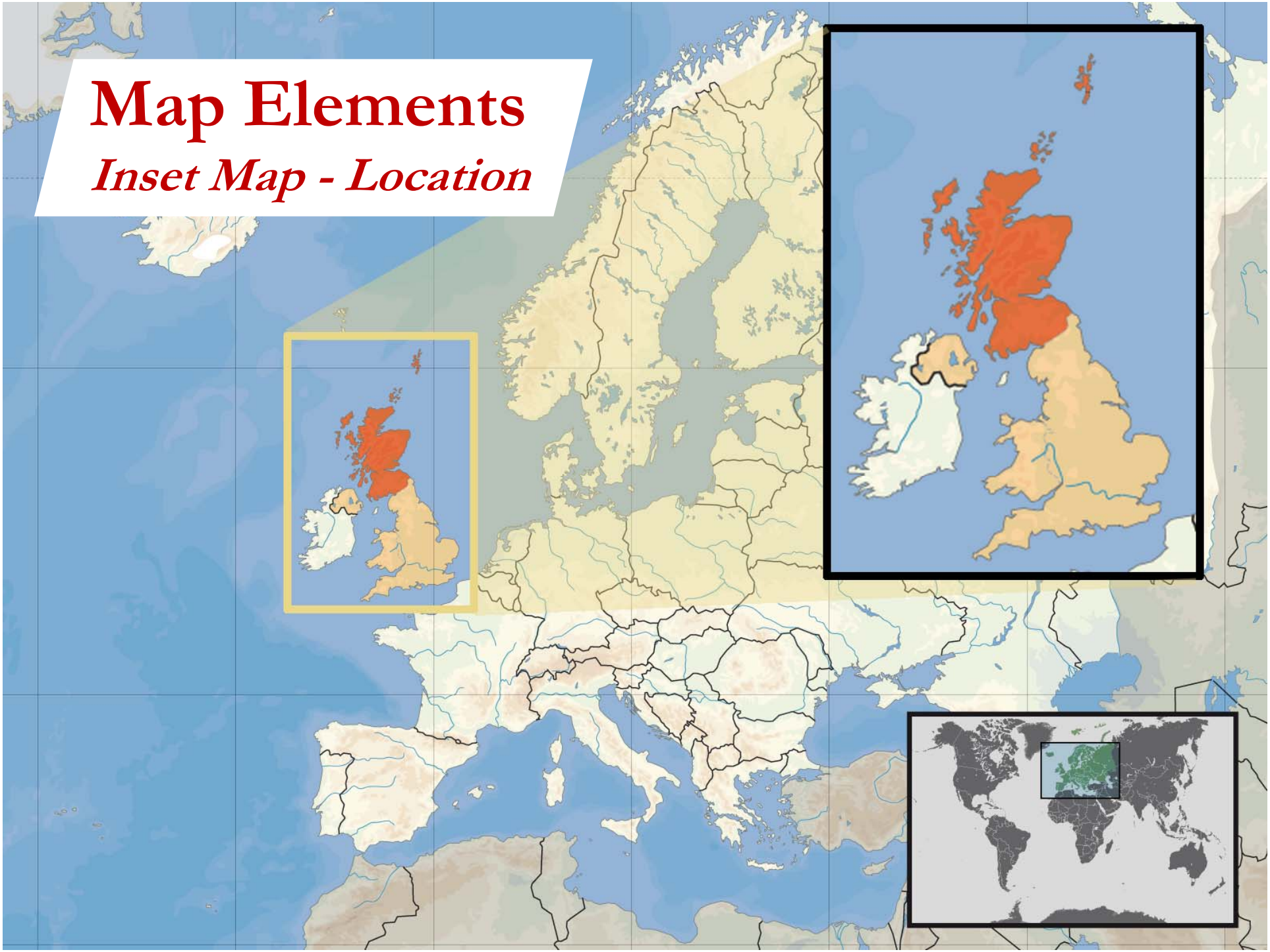
- title (subtitle)
- legend
- scale
- **Inset Map**
- credit note
- date
- logo
- mapped (unmapped) area
- borders - neatlines
- graticules - grids
- map symbols
- labels
- direction (north arrow)

Map Elements

Inset Map – Location

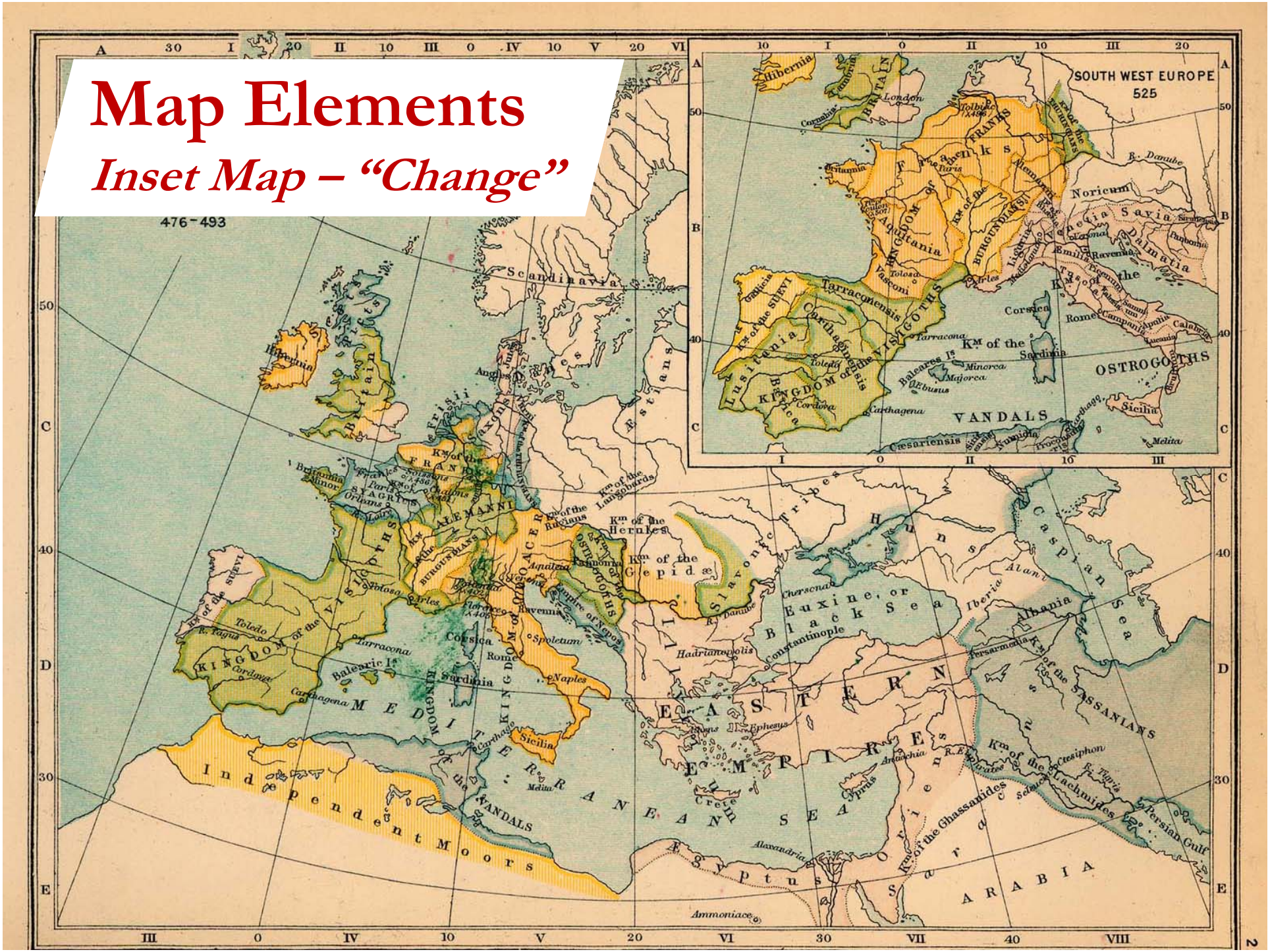
Map Elements

Inset Map - Location



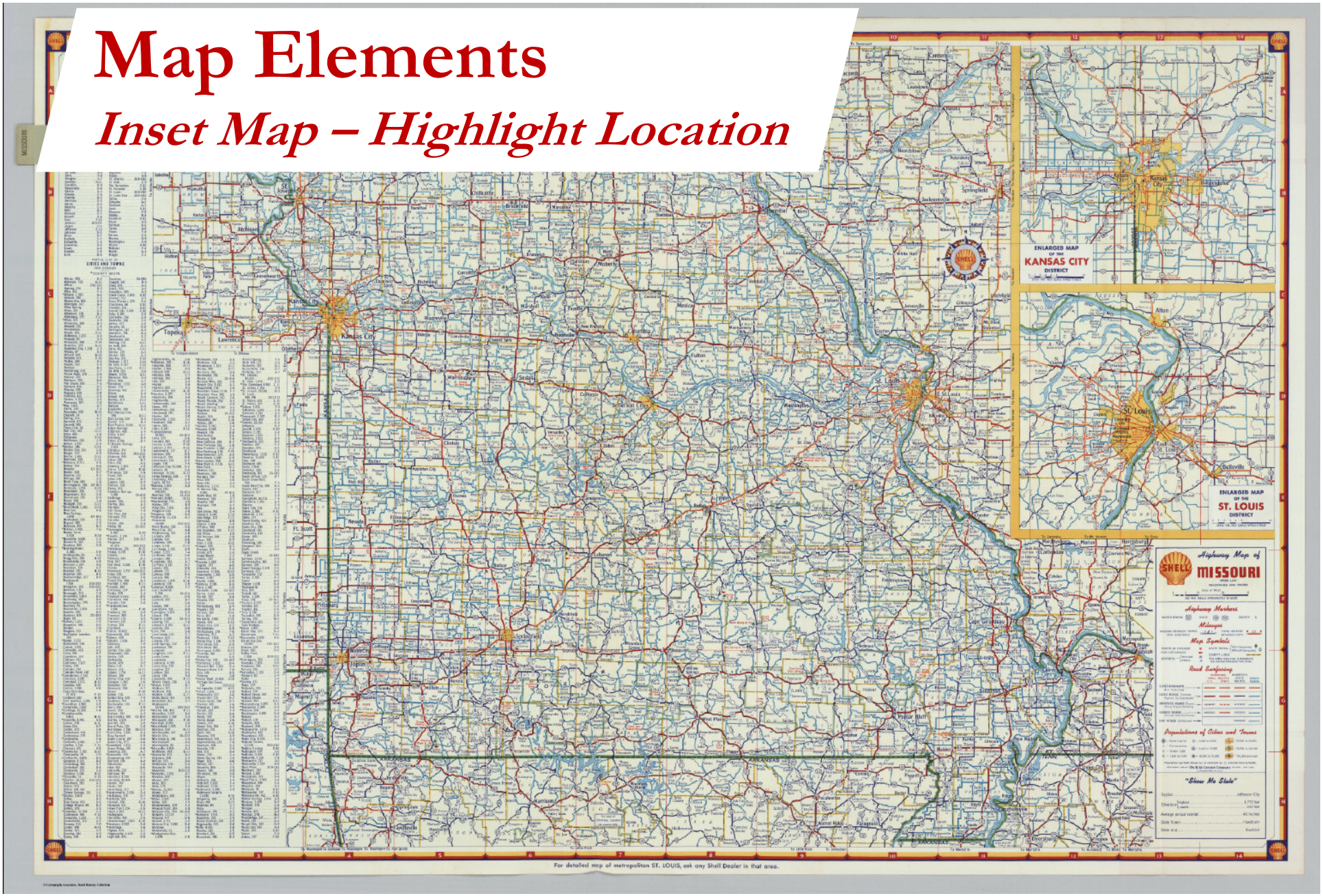
Map Elements

Inset Map – "Change"



Map Elements

Inset Map – Highlight Location

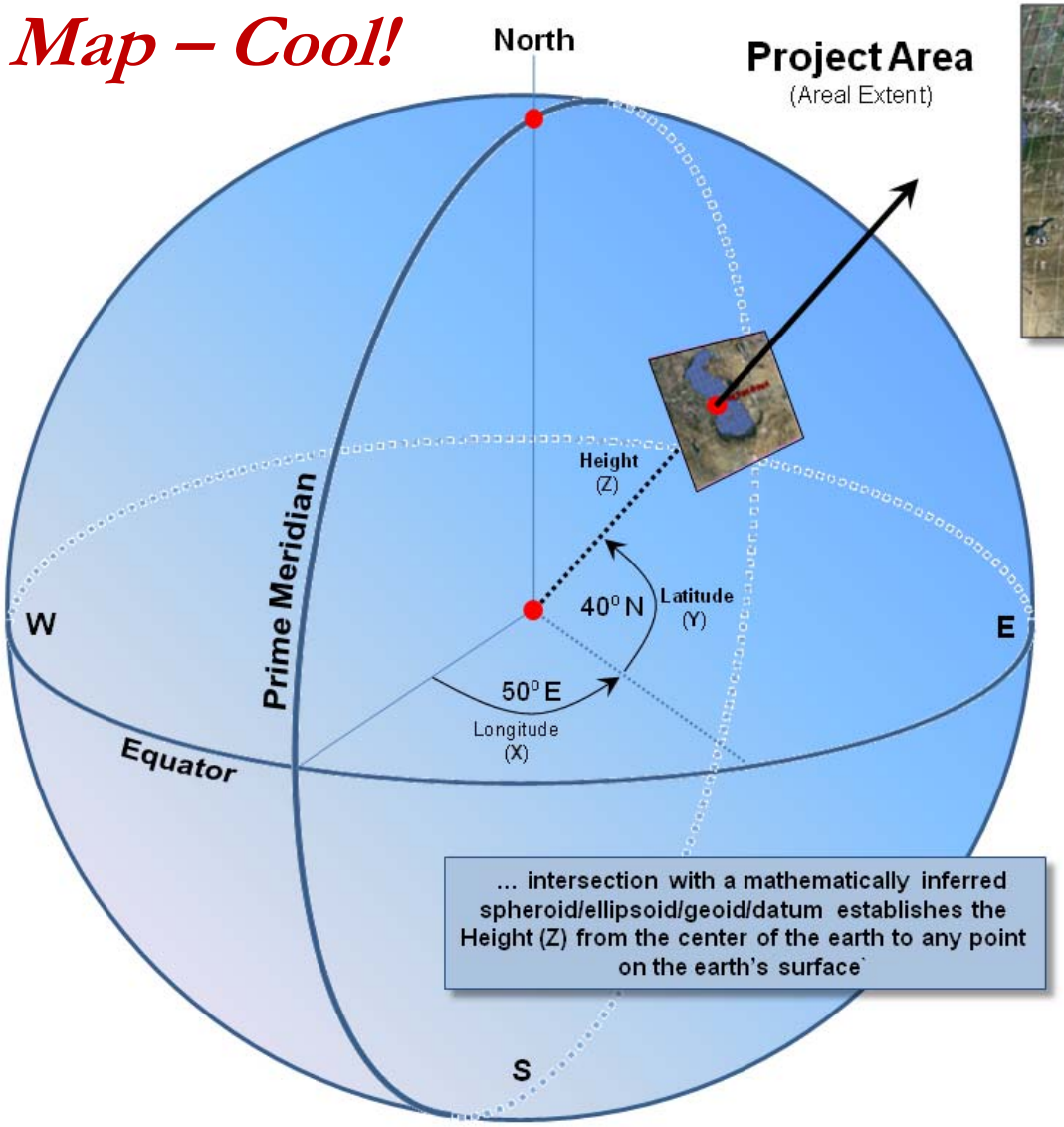


Map Elements

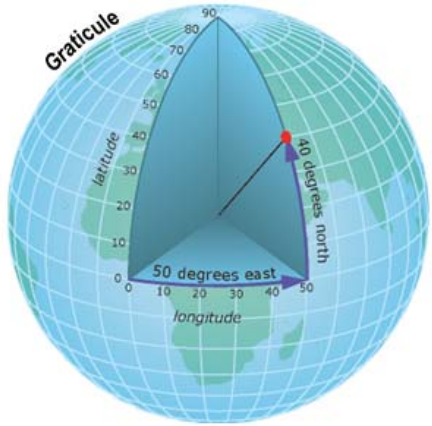
Inset Map – Additional Map Data

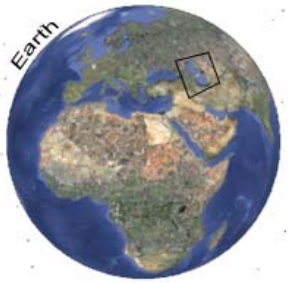
Map Elements

Inset Map – Cool!



Caspian Sea off the coast of Azerbaijan



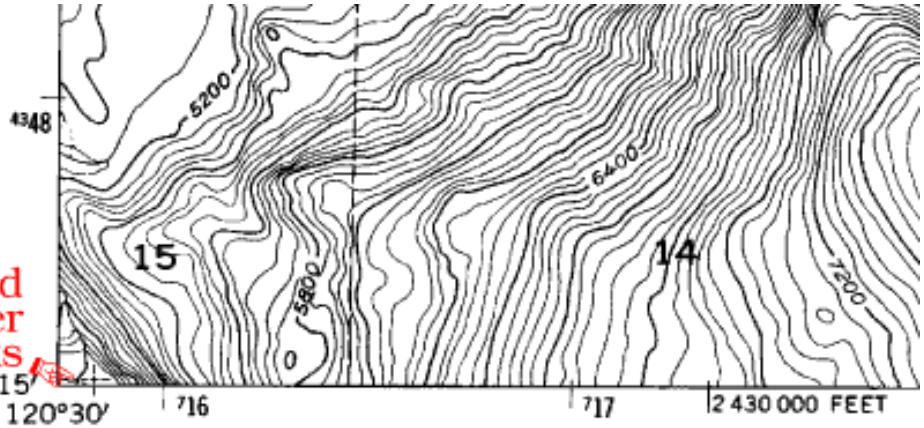


Map Elements

- title (subtitle)
- legend
- scale
- inset map
- **Credit Note**
- date
- logo
- mapped (unmapped) area
- borders - neatlines
- graticules - grids
- map symbols
- labels
- direction (north arrow)

Map Elements

Credit Note



Dashed corner ticks

Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1953. Field check 1955

Map datum

Polyconic projection. 1927 North American datum
10,000-foot grid based on California coordinate system, zone 2
1000-meter Universal Transverse Mercator grid ticks,
zone 10, shown in blue
To place on the predicted North American Datum 1983
move the projection lines 15 meters north and
89 meters east as shown by the dashed corner ticks

Datum offset

Map Elements

Credit Note

COMPILED IN THE DIVISION OF REALTY
FROM SURVEYS BY USFWS AND USGS
UTM ZONE 18, NAD 1927, METERS

HADLEY, MASSACHUSETTS JANUARY, 2001
REVISED: 02/07/01

COMPILED IN THE DIVISION OF REALTY,
CARTOGRAPHY AND SPATIAL DATA SERVICES
FROM SURVEYS BY USFWS AND USGS
ADDITIONAL DATA FROM THE CITY OF VIRGINIA BEACH,
THE LANDMARK DESIGN GROUP, WILEY & WILSON, INC,
JOHNSON, MIRMIRAN & THOMPSON, INC, & WOOLPERT LLP
UTM ZONE 18N, NAD 1983, METERS
PHOTO DATE : MARCH 06, 1994
HADLEY, MASSACHUSETTS DECEMBER 2000
REVISED : 03/07/2001

Map Elements

- title (subtitle)
- legend
- scale
- inset map
- credit note
- **Date**
- logo
- mapped (unmapped) area
- borders - neatlines
- graticules - grids
- map symbols
- labels
- direction (north arrow)

Map Elements

Date

Map Elements

Date with filename

Map Elements

- title (subtitle)
- legend
- scale
- inset map
- credit note
- date
- **Logo**
- mapped (unmapped) area
- borders - neatlines
- graticules - grids
- map symbols
- labels
- direction (north arrow)

Map Elements

Logo

ALWAYS ensure you use a sharp, clear, non-blurry, legible, readable, etc. logo in your maps

… *Especially* when they are the logos of another agency or entity.

Map Elements

Logo

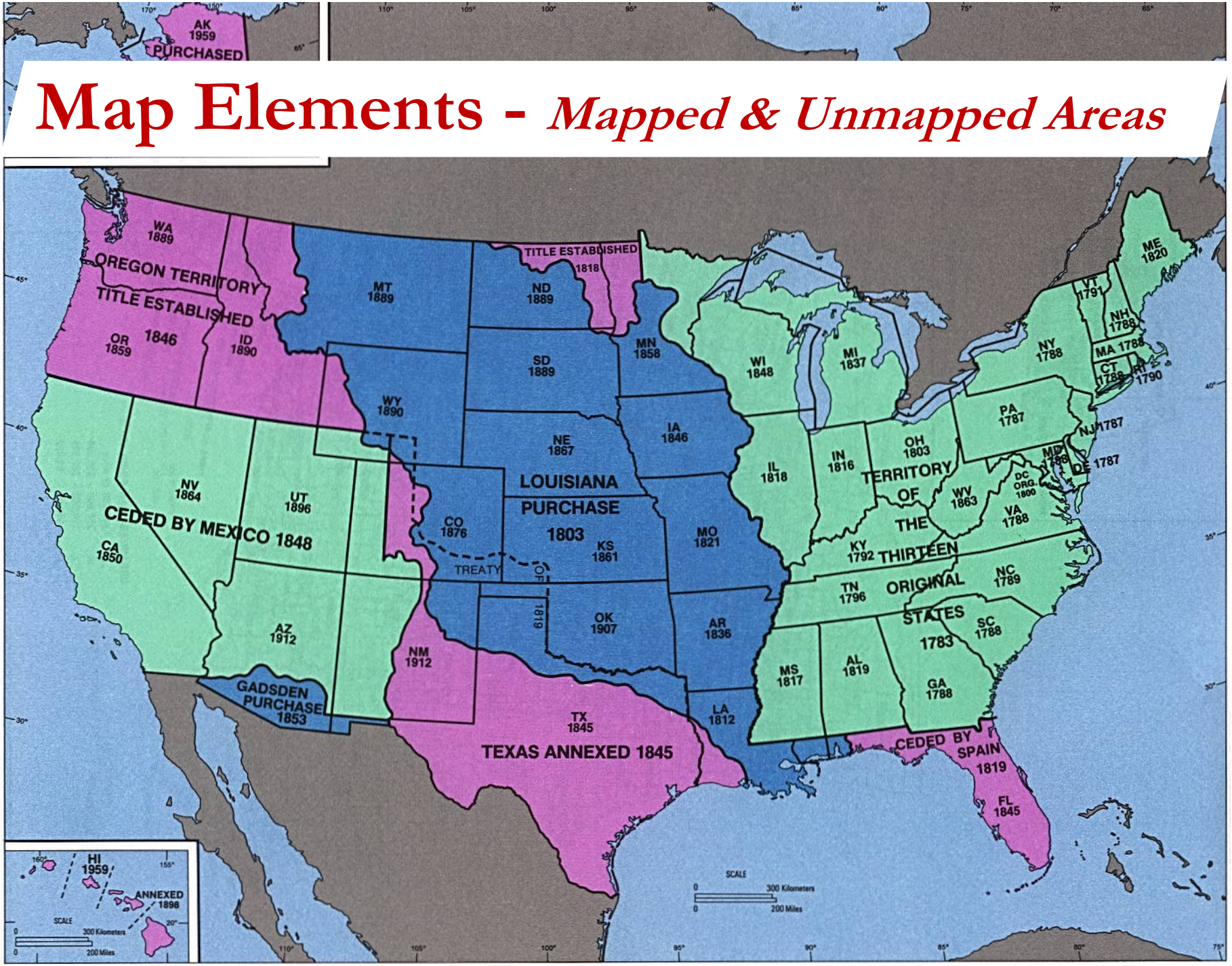
Resolution Matters

Map Elements

- title (subtitle)
- legend
- scale
- inset map
- credit note
- date
- logo

- **Mapped** (unmapped) **Area**
- borders - neatlines
- graticules - grids
- map symbols
- labels
- direction (north arrow)

Map Elements - *Mapped & Unmapped Areas*



Map Elements

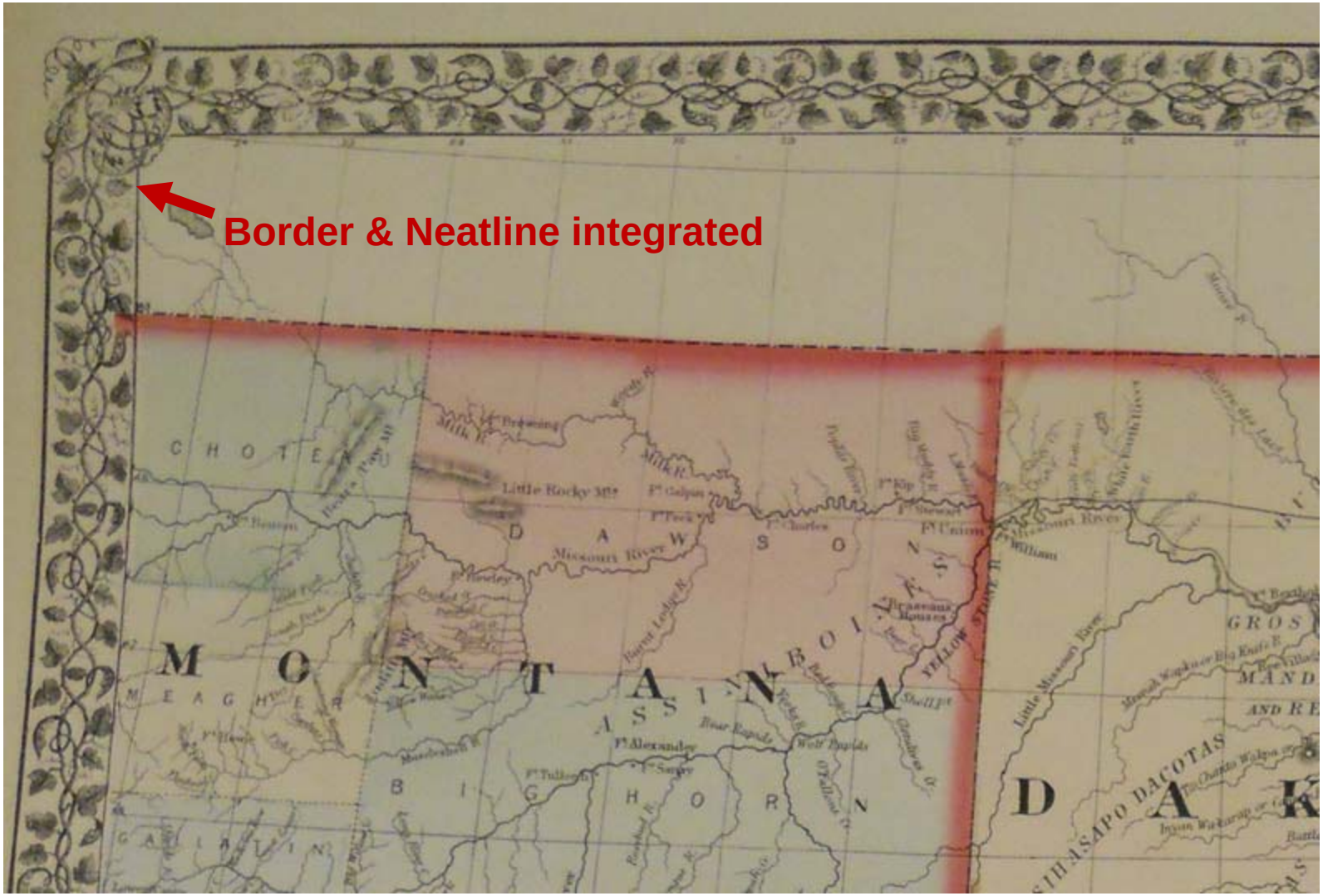
- title (subtitle)
- legend
- scale
- inset map
- credit note
- date
- logo
- mapped (unmapped) area
- **Borders - Neatlines**
- graticules - grids
- map symbols
- labels
- direction (north arrow)

Map Elements – *Borders & Neatlines*

Border

Neatline

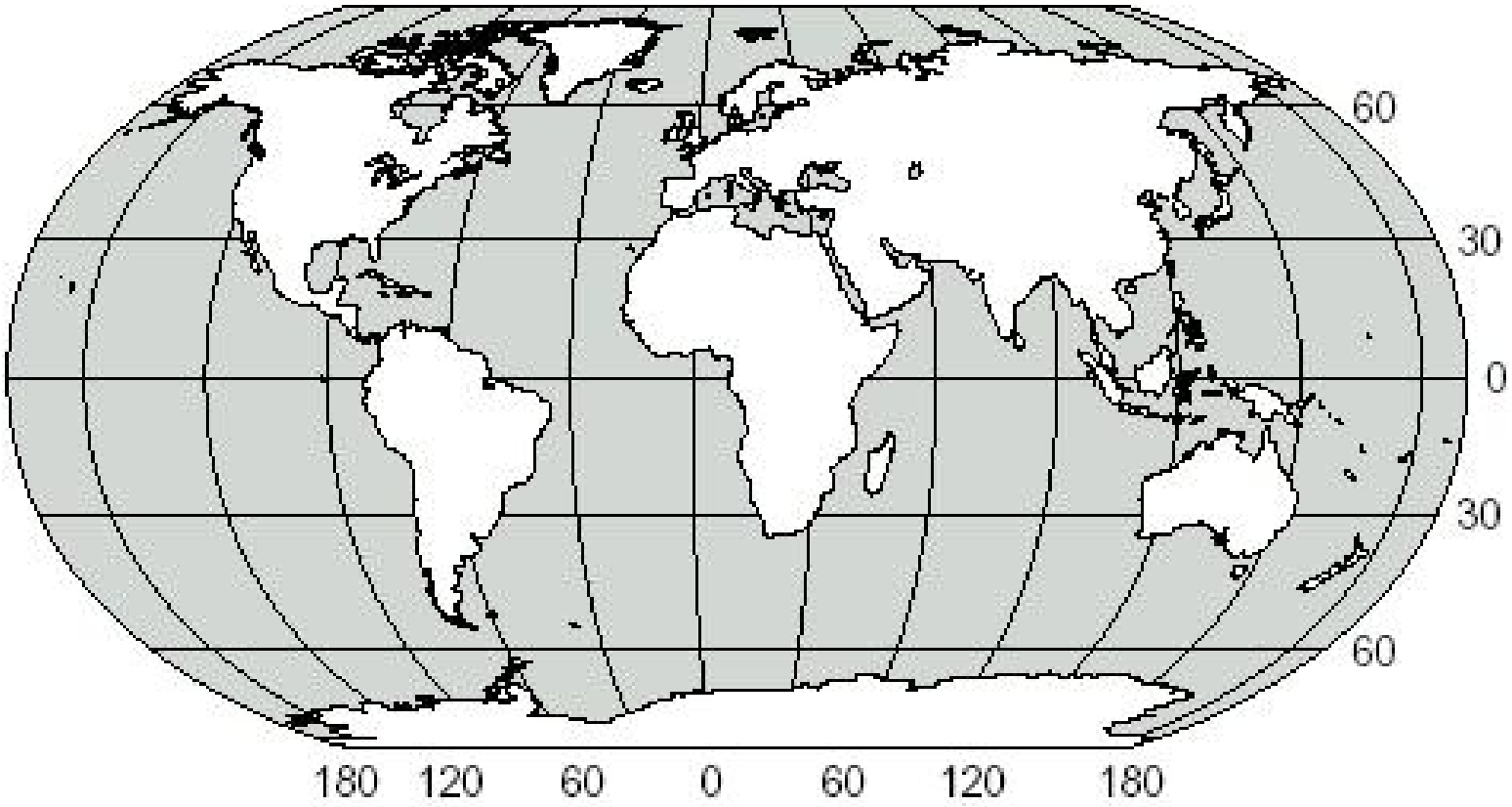
Map Elements – *Borders & Neatlines*



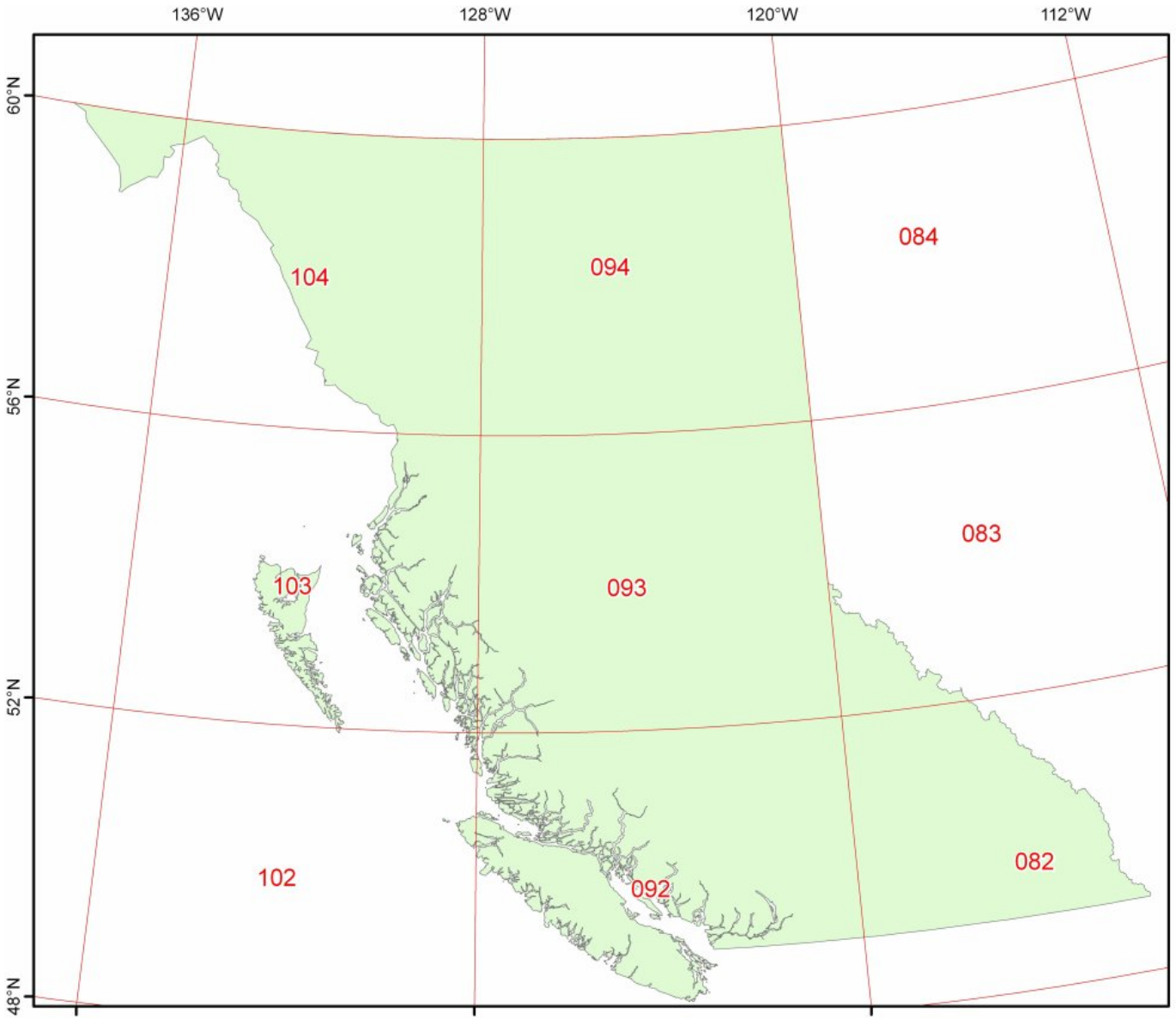
Map Elements

- title (subtitle)
- legend
- scale
- inset map
- credit note
- date
- logo
- mapped (unmapped) area
- borders - neatlines
- **Graticules - Grids**
- map symbols
- labels
- direction (north arrow)

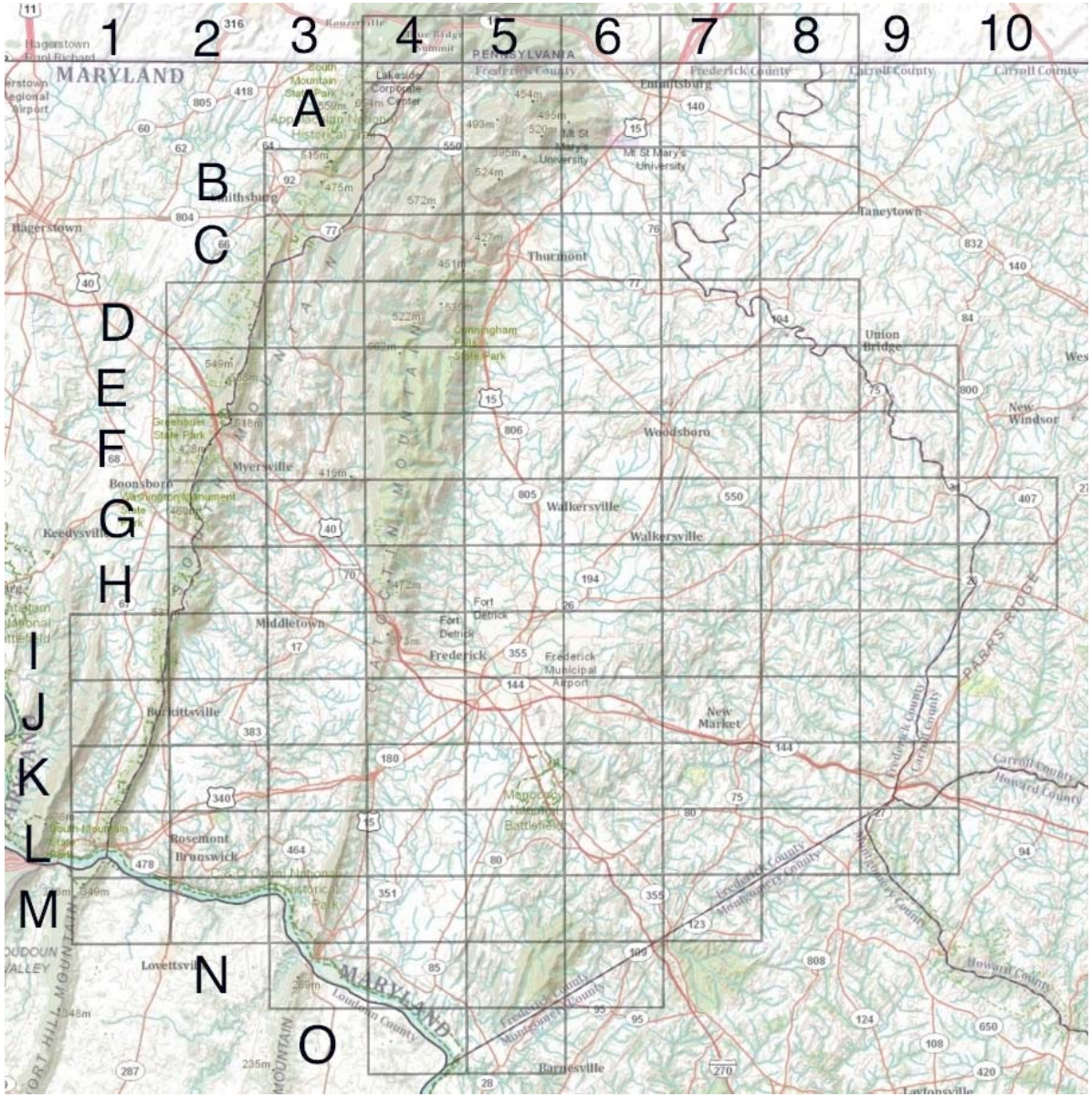
Map Elements - *Graticules*



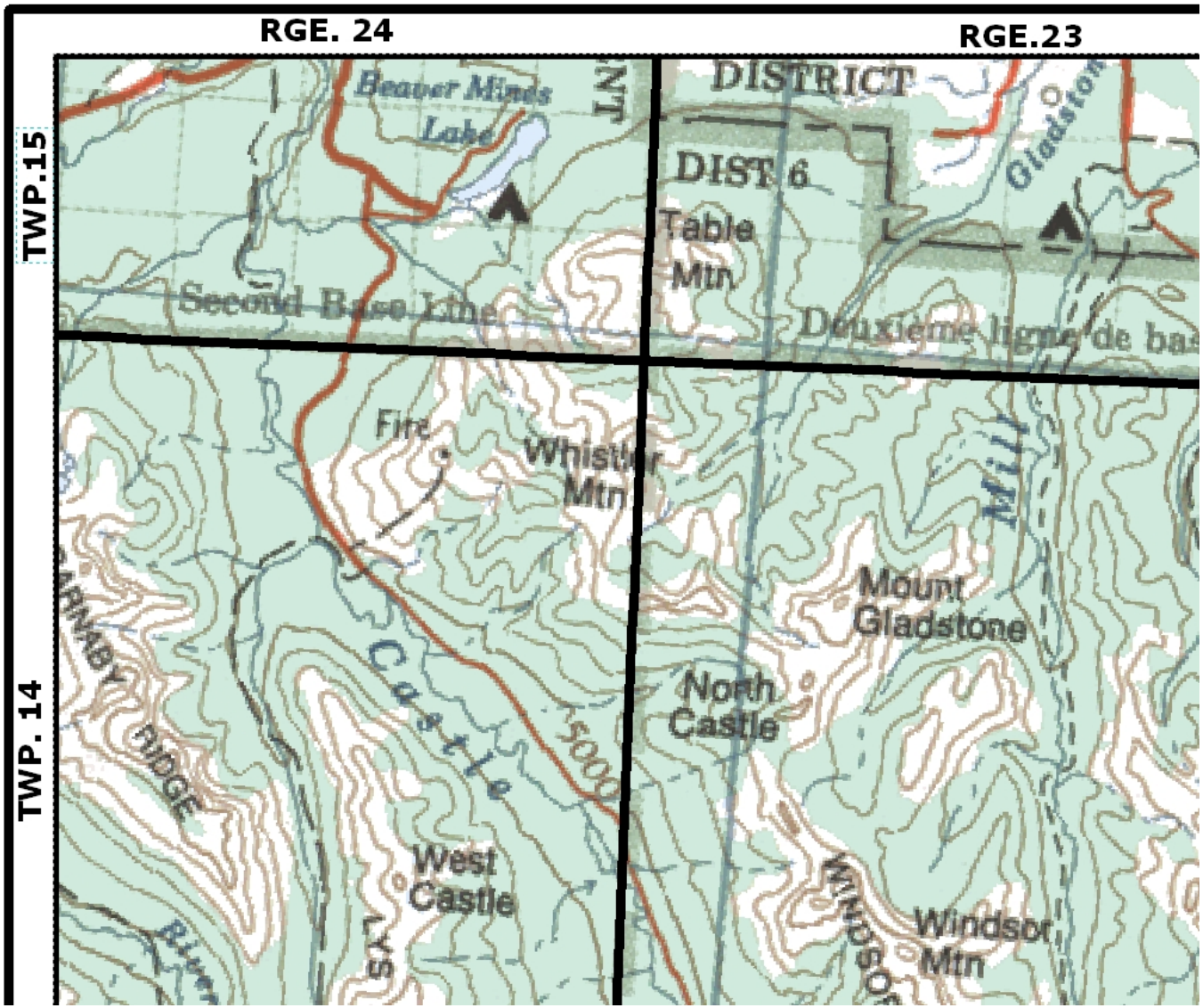
Map Elements – *Graticules (Latitude / Longitude)*



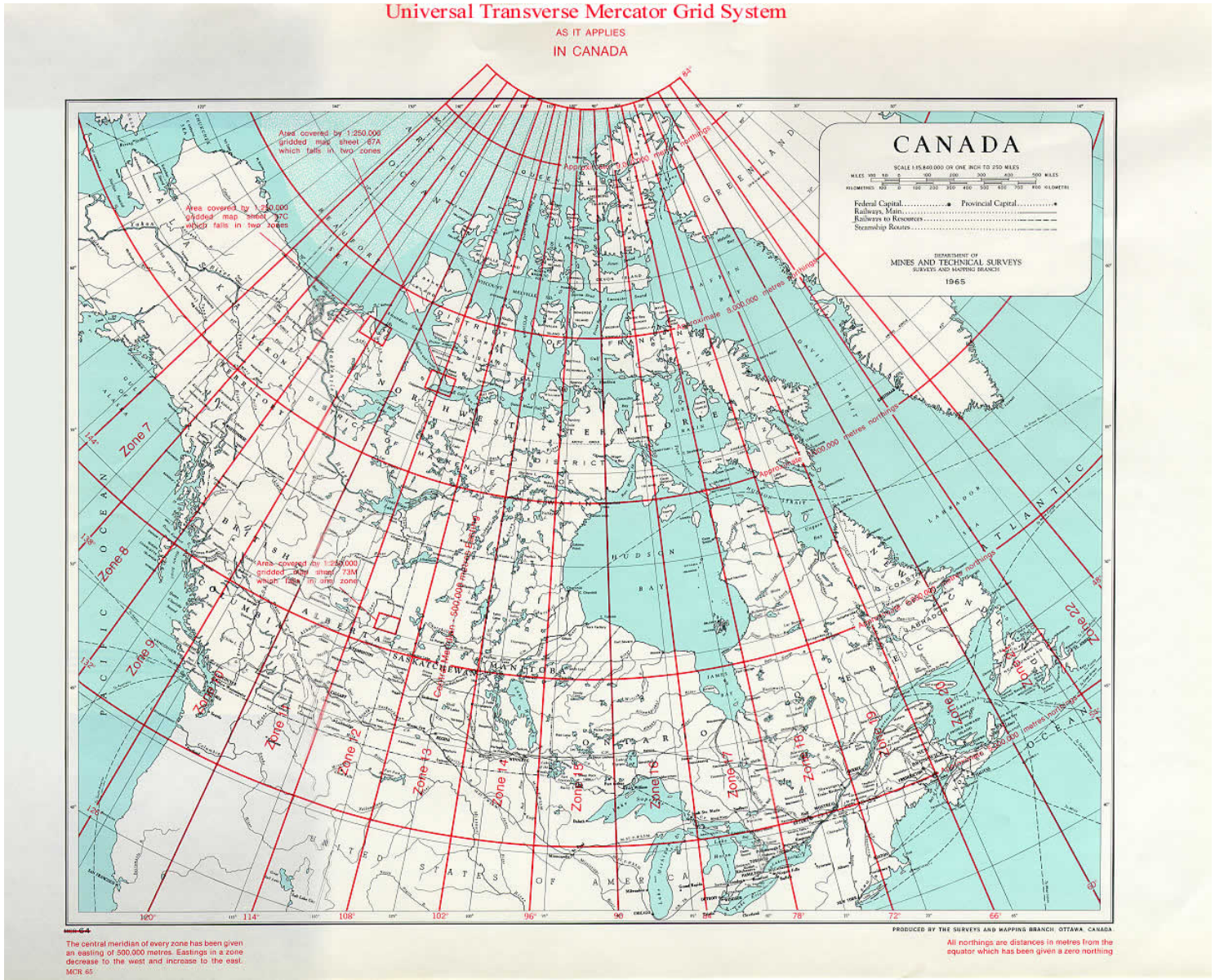
Map Elements – *Grids for Reference*



Map Elements – *Grids for PLSS*



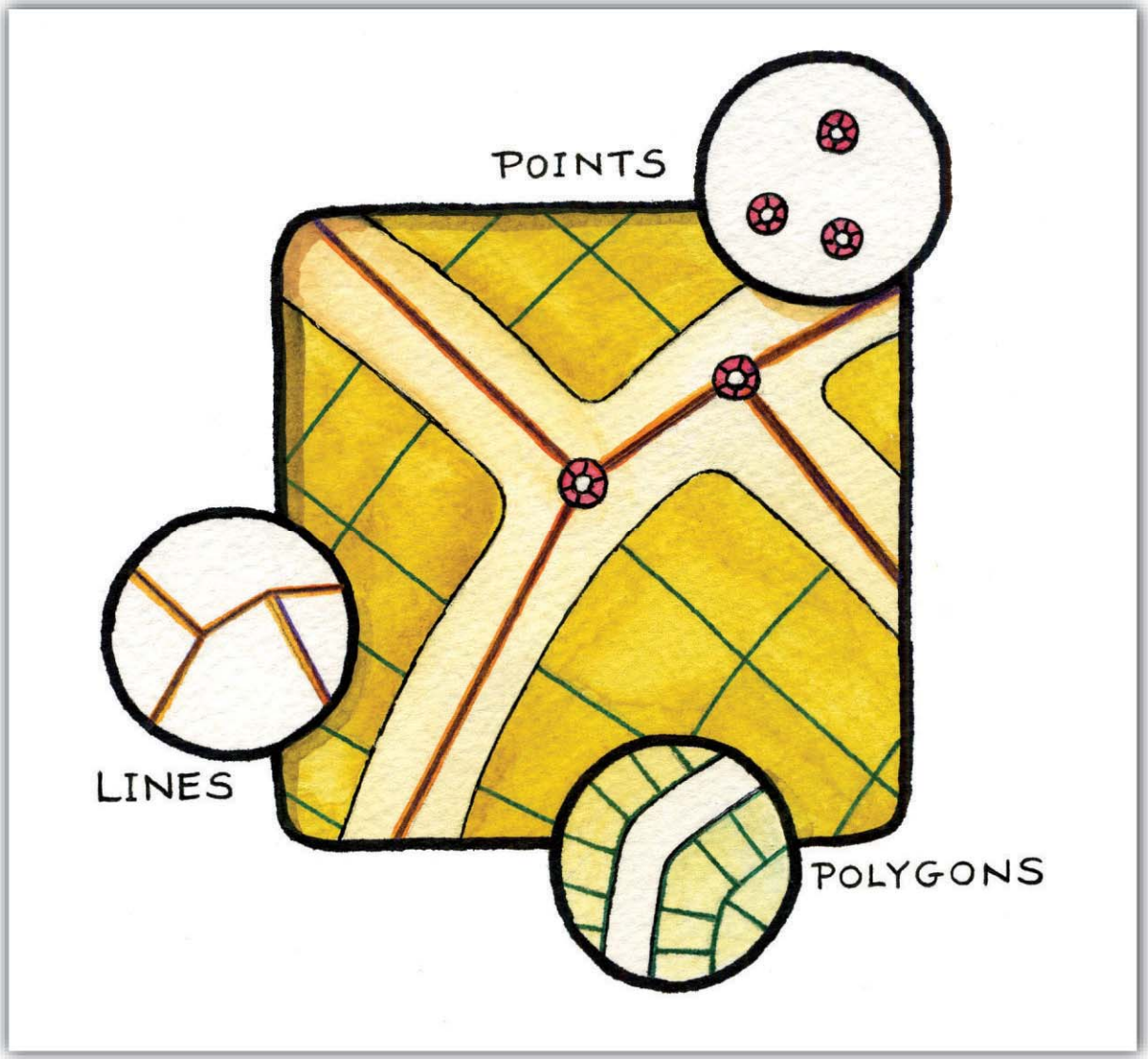
Map Elements - *Graticules & Grid*



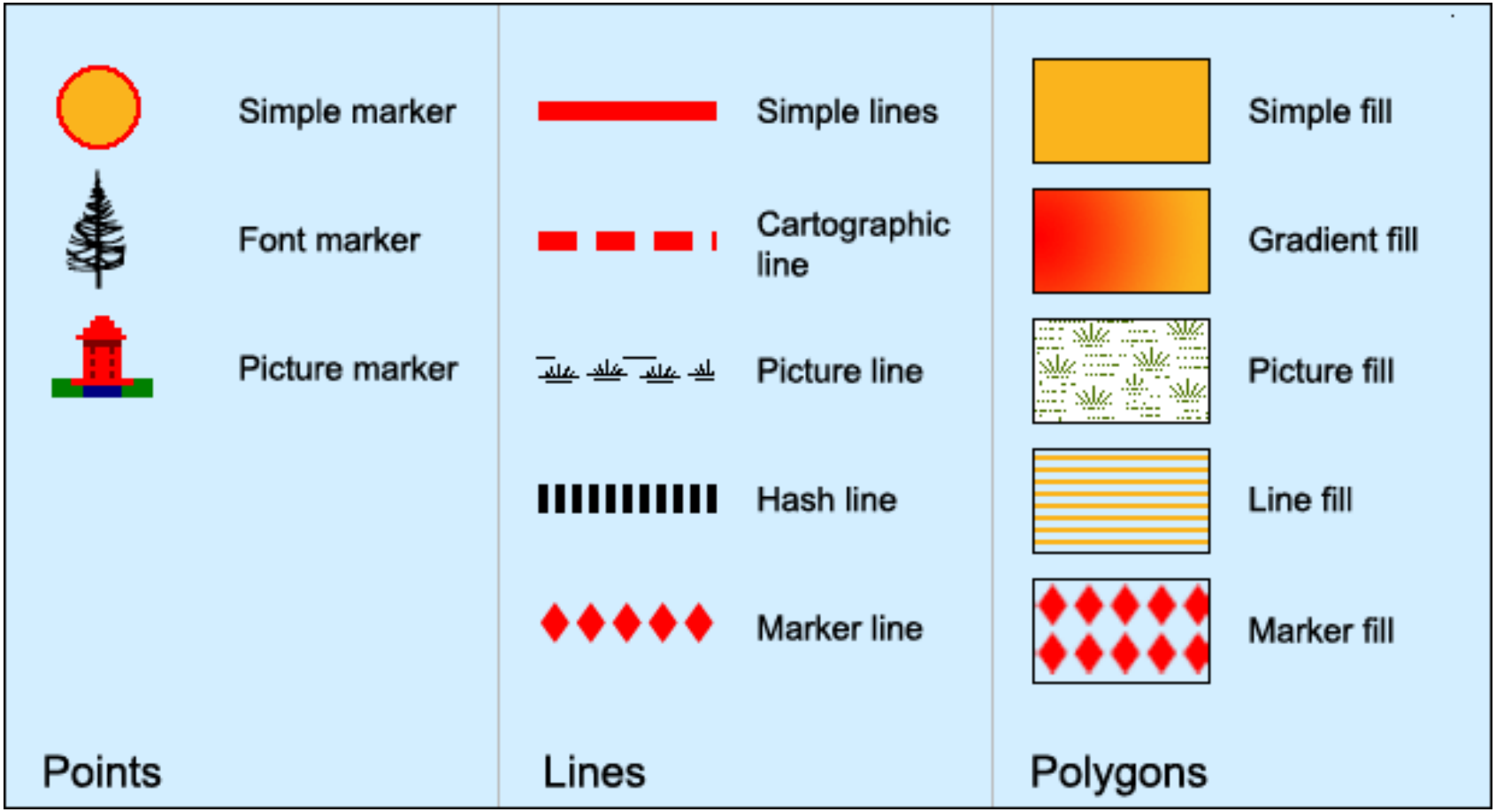
Map Elements

- title (subtitle)
- legend
- scale
- inset map
- credit note
- date
- logo
- mapped (unmapped) area
- borders - neatlines
- graticules - grids
- **Map Symbols**
- placenames
- feature labels
- north arrow

Map Elements – *Map Symbols*



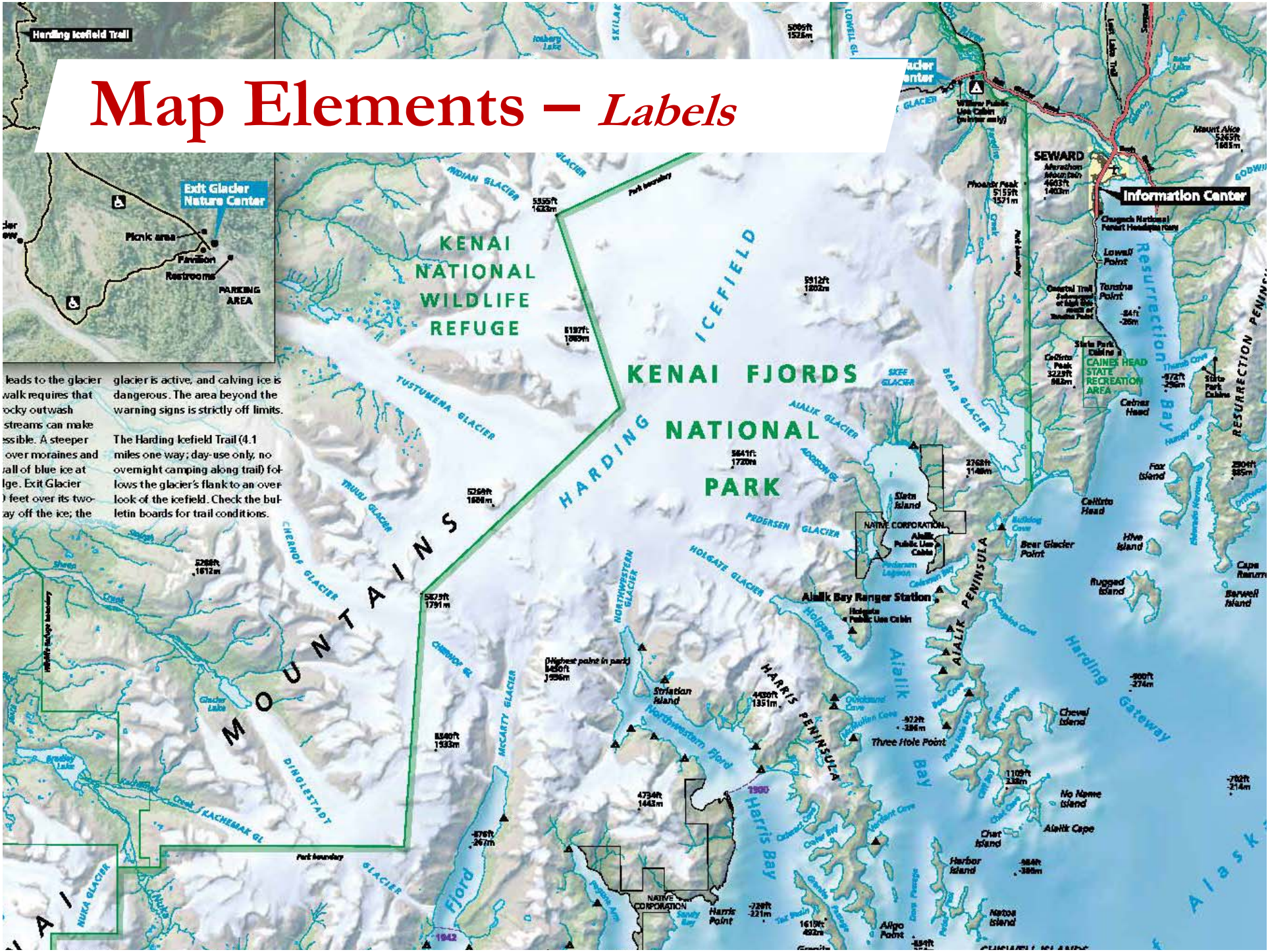
Map Elements – *Map Symbols*



Map Elements

- title (subtitle)
- legend
- scale
- inset map
- credit note
- date
- logo
- mapped (unmapped) area
- borders - neatlines
- graticules - grids
- map symbols
- **Labels**
- direction (north arrow)

Map Elements – *Labels*



Map Elements – *Labels*

Map Elements

- title (subtitle)
- legend
- scale
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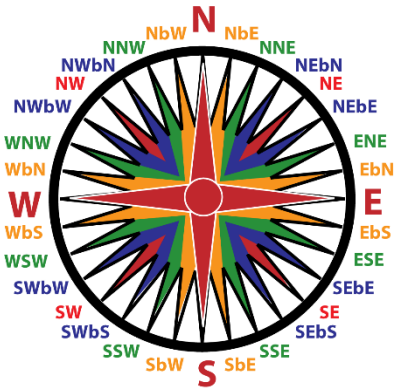
- credit note
- date
- logo
- mapped (unmapped) area
- borders - neatlines
- graticules - grids
- map symbols
- labels
- **Direction (North Arrow)**

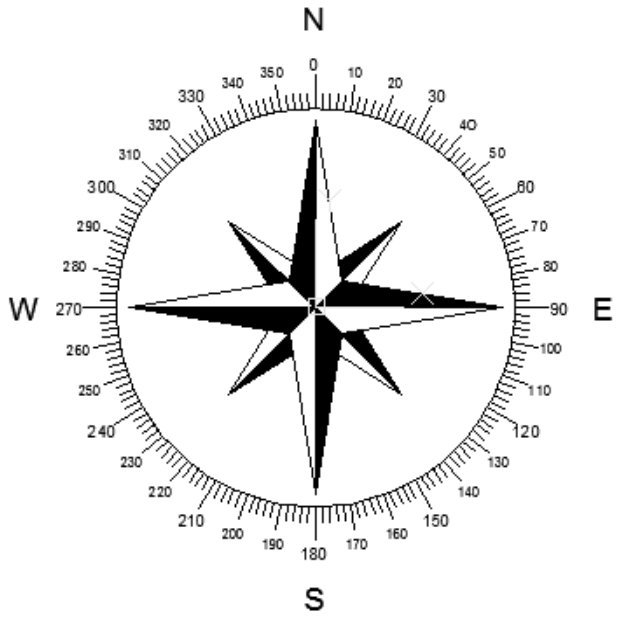
Map Elements

Direction (North Arrow)



Map Elements

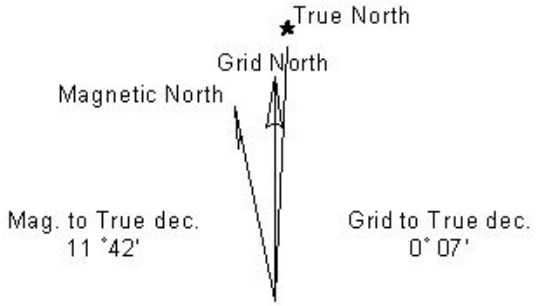
Direction (North Arrow) – Rule of Thumb



An elaborate compass rose type north arrow is appropriate for small scale maps, whereas large scale maps lend themselves to a less ornate arrow style.

Map Elements

Direction (North Arrow)



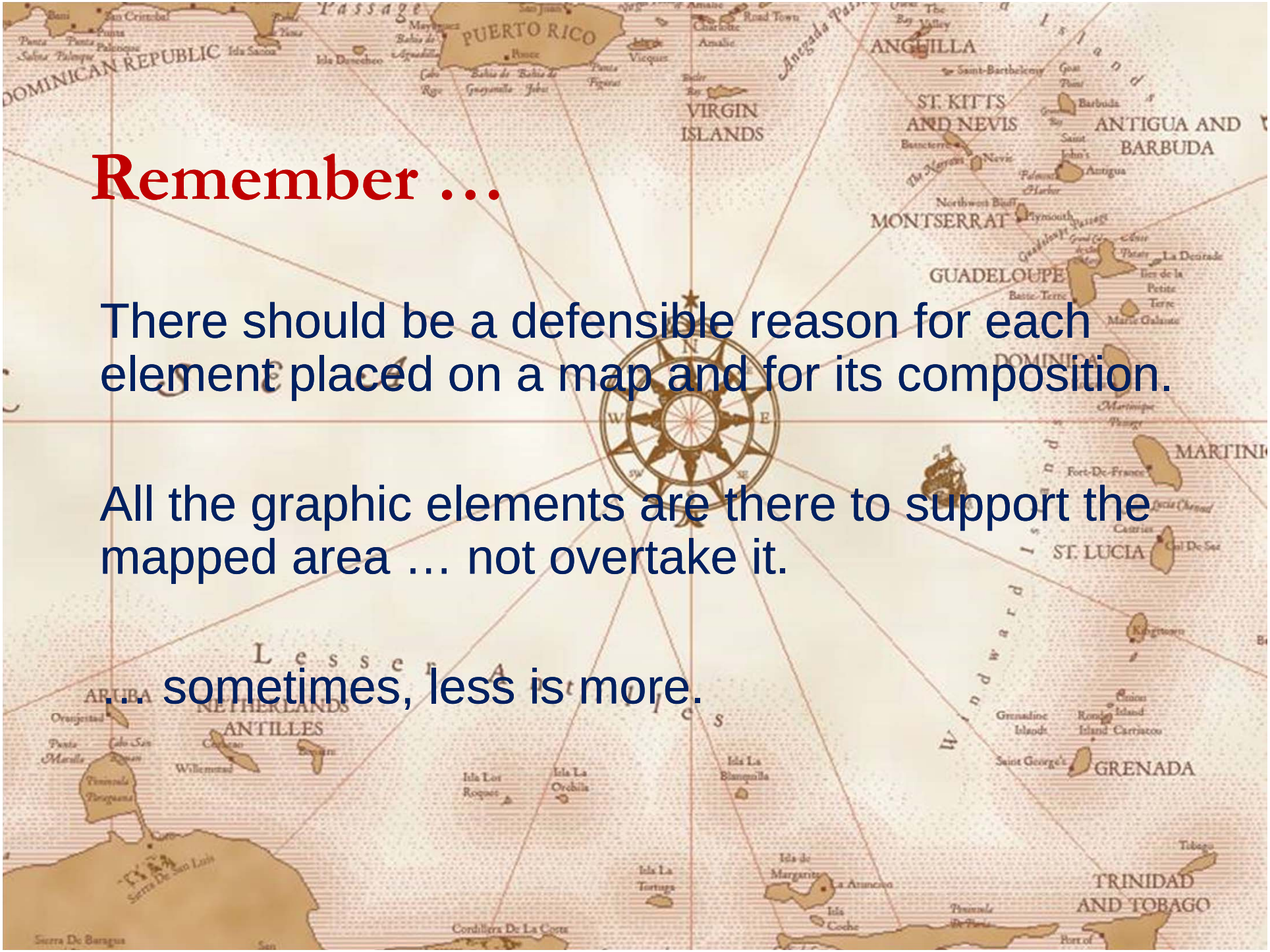
True vs. Magnetic vs. Grid North

True North: the direction to the north pole of the earth.

Magnetic North : the direction a compass needle will point.

Grid North : the direction of the grid being superimposed.

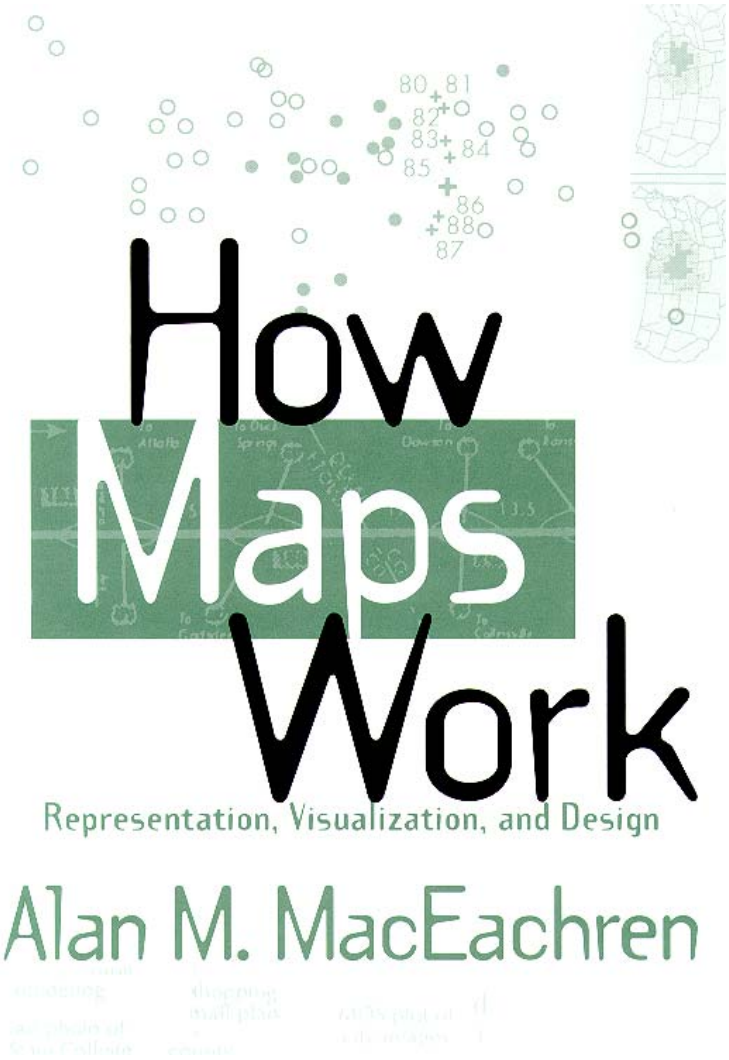
Just one last thing regarding map elements
PUERTO RICO
DOMINICAN REPUBLIC
VIRGIN ISLANDS
ANGUILLA
ST. KITTS AND NEVIS
ANTIGUA AND BARBUDA
GUADELOUPE
DOMINICA
MARTINIQUE
ST. LUCIA
GRENADA
TRINIDAD AND TOBAGO
ARUBA
NETHERLANDS ANTILLES
Lesser Antilles
Windward Islands
N
NE
E
SE
S
SW
W
NW



Remember …

There should be a defensible reason for each element placed on a map and for its composition.

All the graphic elements are there to support the mapped area … not overtake it.

… sometimes, less is more.

Book Recommendations