

MAPS

A representation of the whole or a part of an area.

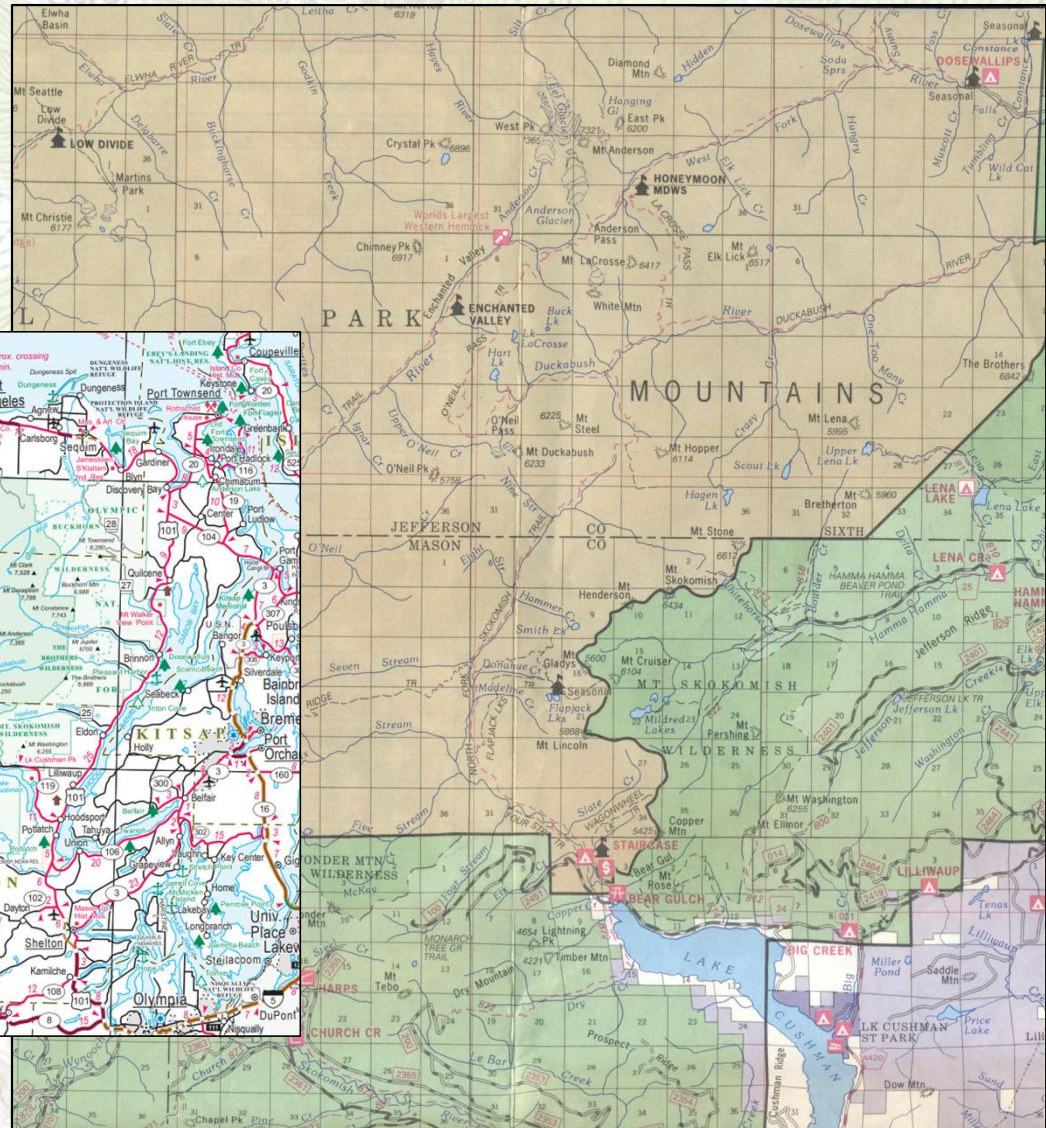


Olympia Navigation

4/27/2025

Planimetric

No contour information



Olympia Navigation

Topographic Maps

- Coverage
- Colors
- Symbols
- Marginalia
- Contour Lines
- Scale/Distance
- Direction



<https://pubs.usgs.gov/gip/TopographicMapSymbols/topomapsymbols.pdf>



Olympia Navigation

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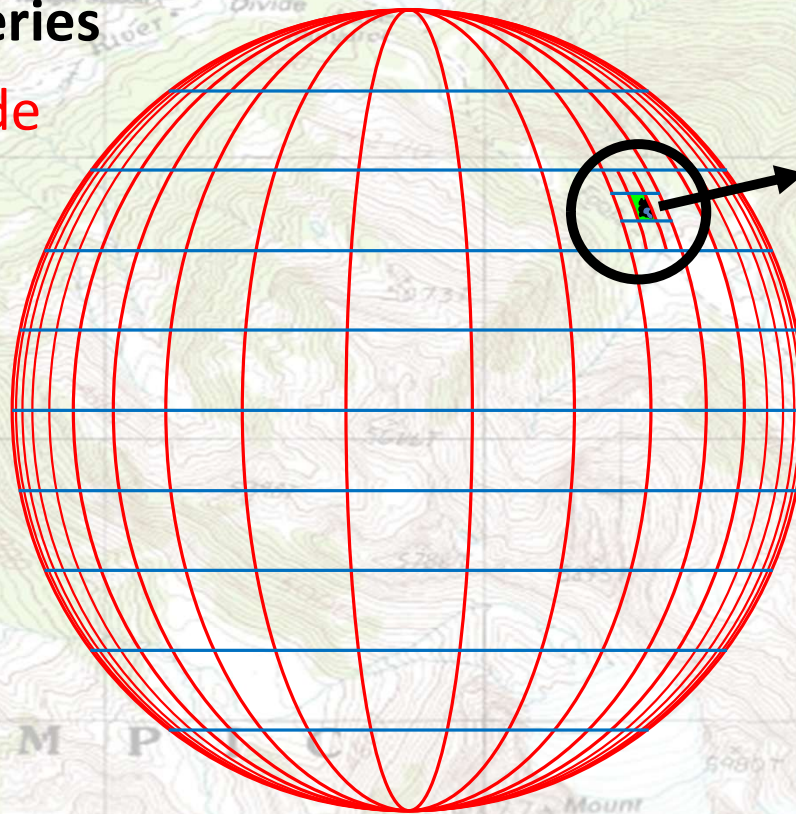
Topographic Maps: Coverage

Define: 7.5 Min. Series

Longitude

Latitude

60
minutes
per
degree



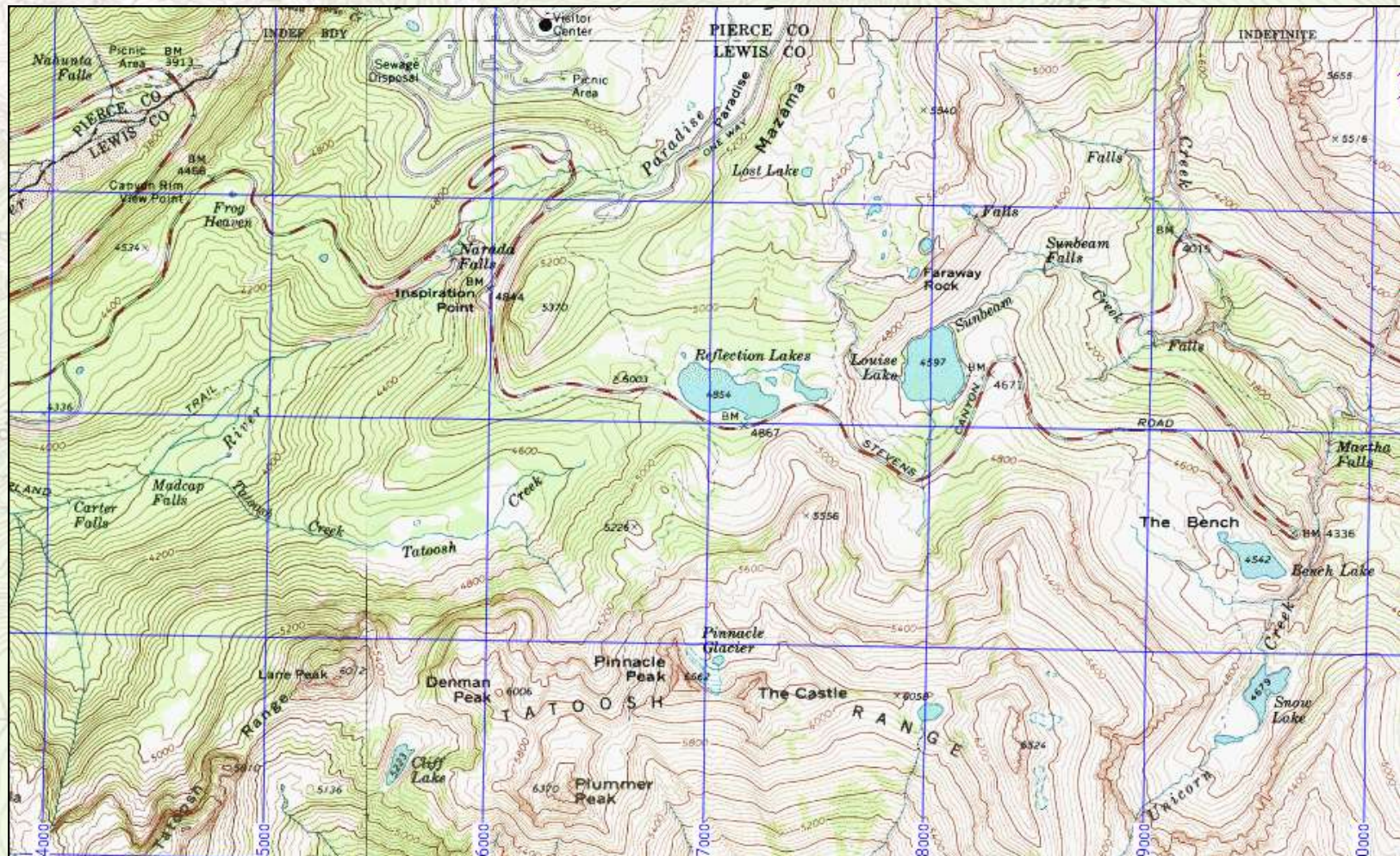
7 ½ min.



7 ½ min.

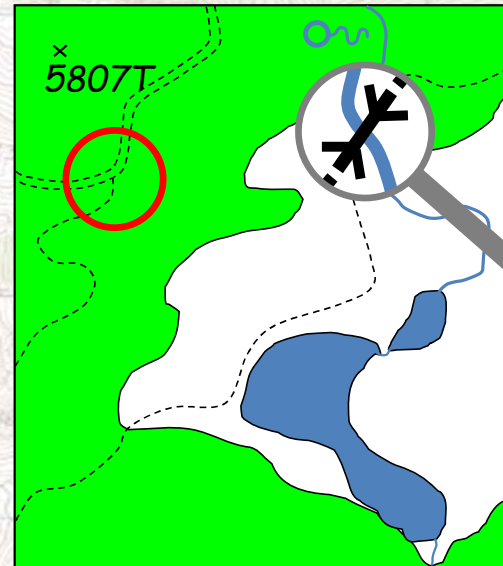


Topographic Map Colors and Symbols

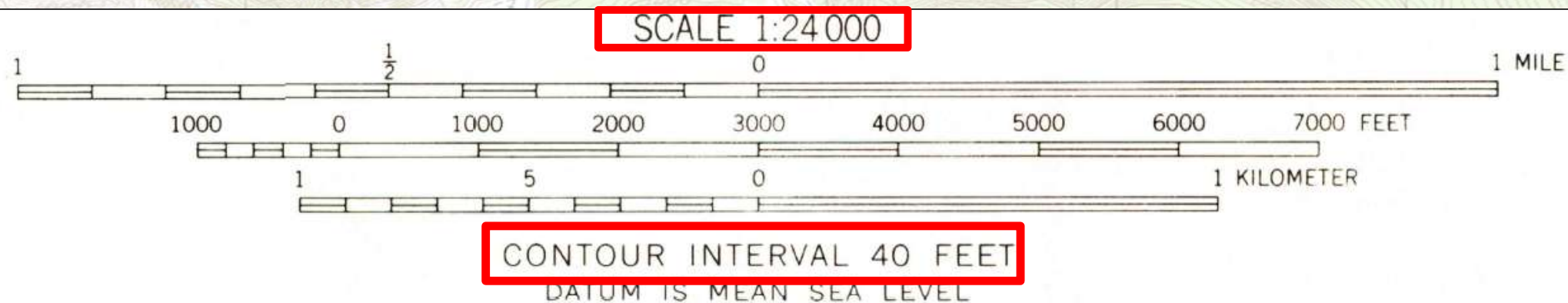


Topographic Map Colors and Symbols

- Colors Identify useful details
- Contour Lines
- Symbols
 - springs
 - Distance
 - footbridges
 - surveying data
 - roads, trails
 - Direction
 - trailhead



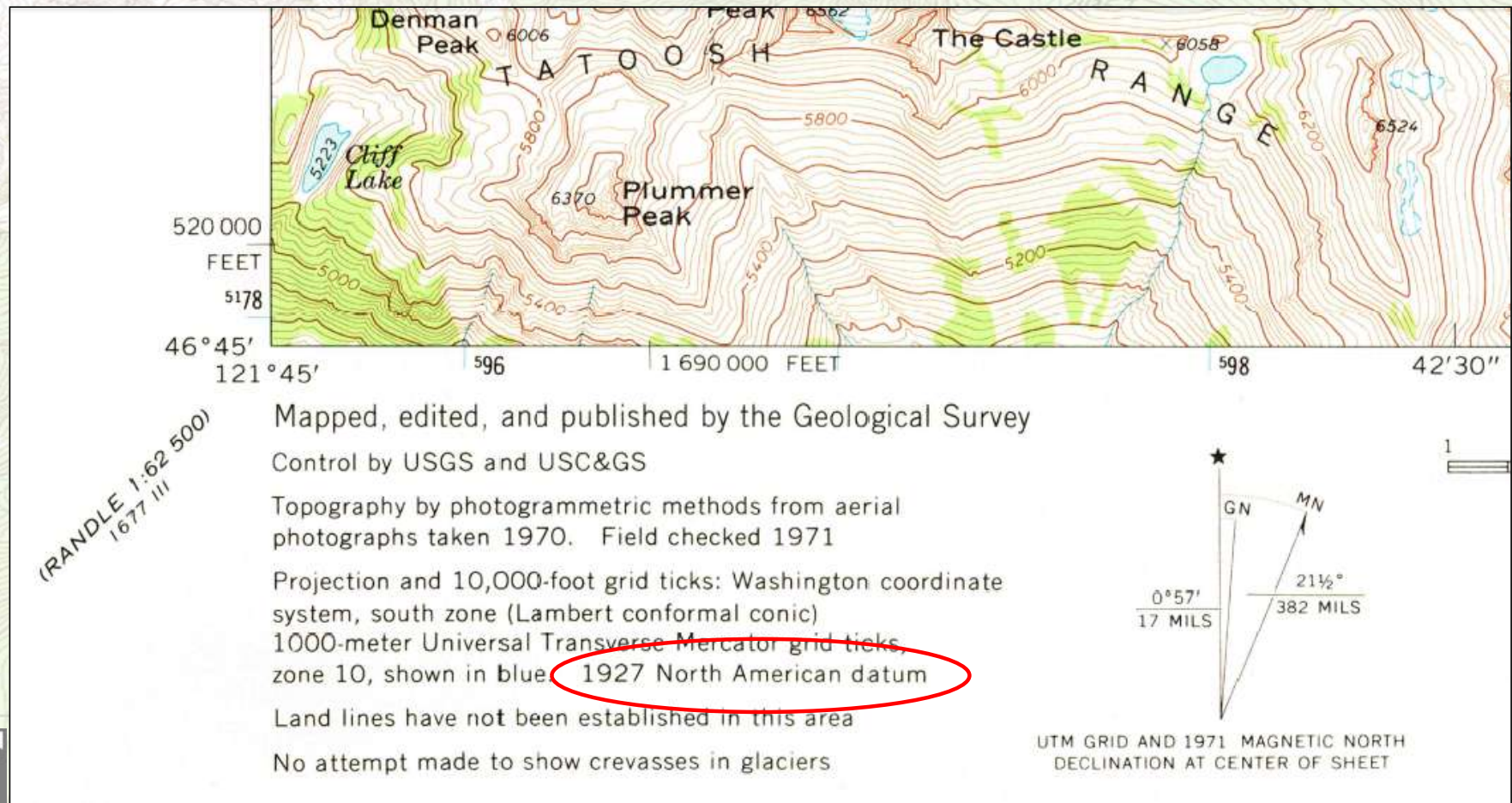
Marginalia: Scale and Contour Interval (CI)



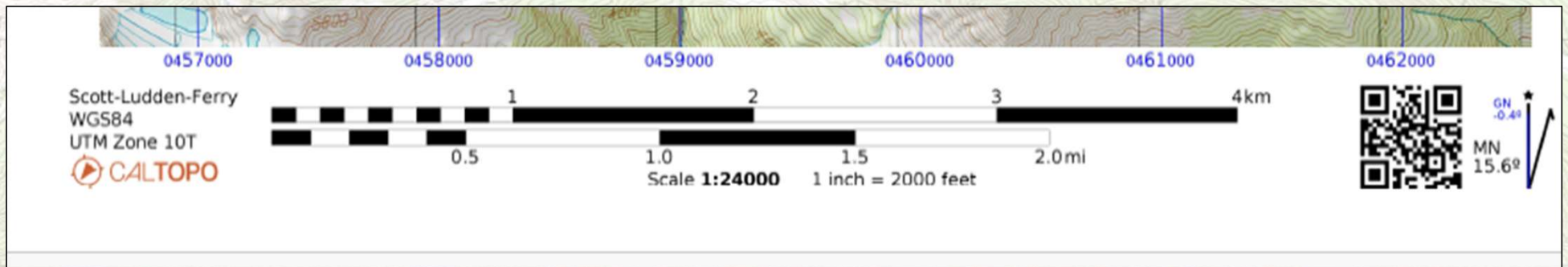
$$1'' = 24,000'' = 2000'$$



Topographic Maps: Marginalia (LHS)



Marginalia (CalTopo)



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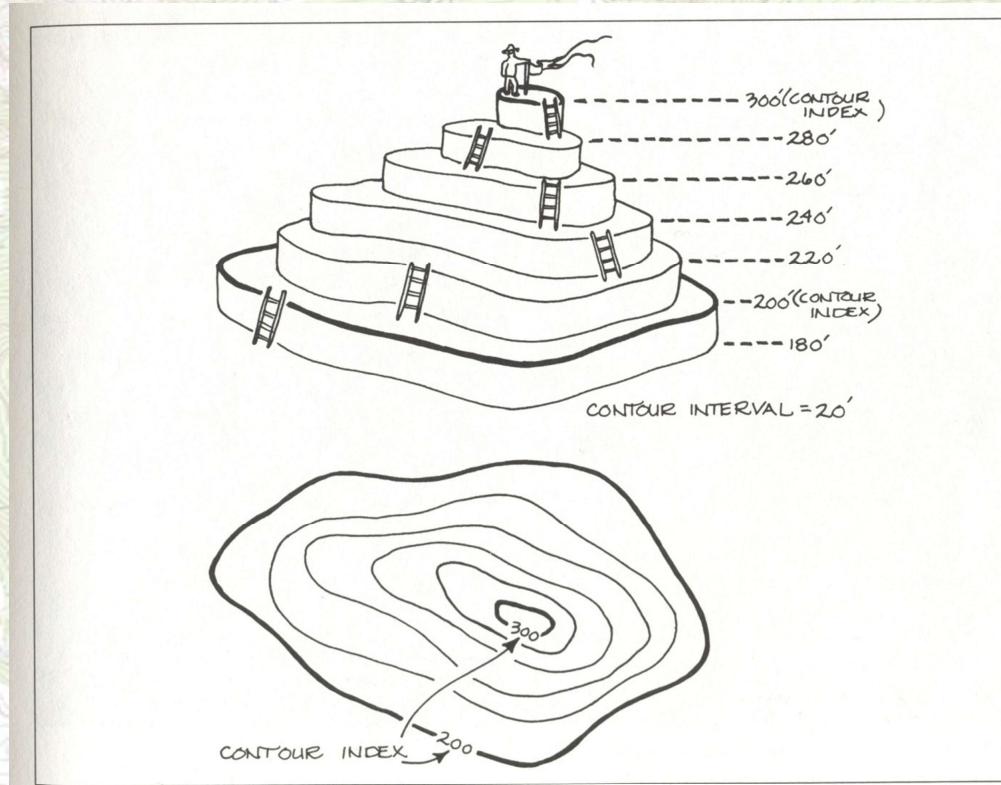
Topographic Maps: Contours

- Coverage
- Colors
- Symbols
- Marginalia
- Contour Lines
- Scale/Distance
- Direction

CONTOURS	
<i>Topographic</i>	
Index	
Approximate or indefinite	
Intermediate	
Approximate or indefinite	
Supplementary	
Depression	
Cut	
Fill	
Continental divide	

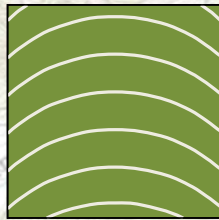


Contour Lines: Shape

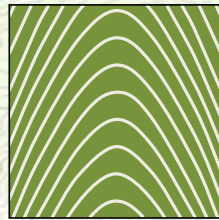


Contour Lines (Shape)

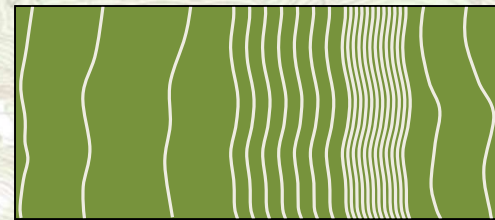
Shape of Lines = Shape of Terrain



*curved =
rounded*



*abrupt V =
gully, ridge*



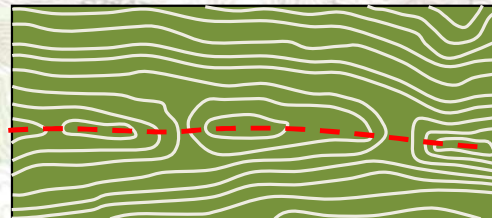
*line
spacing*

 *gentle*

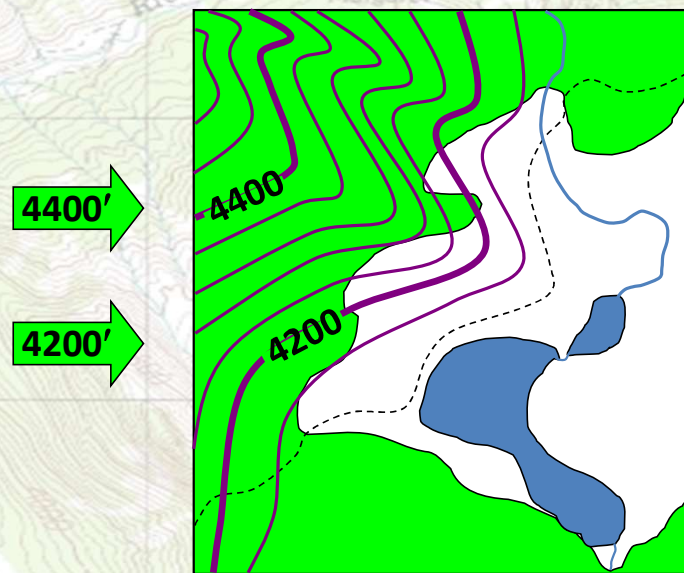
 *steep cliff*

*adjacent
line
shapes*

ridge



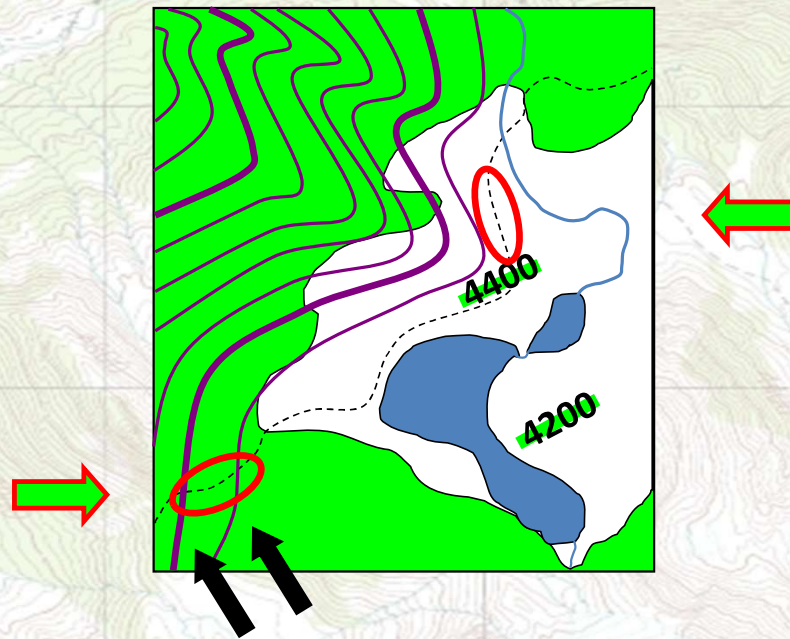
Contour Lines (Elevation)



Contour Interval = 40 ft



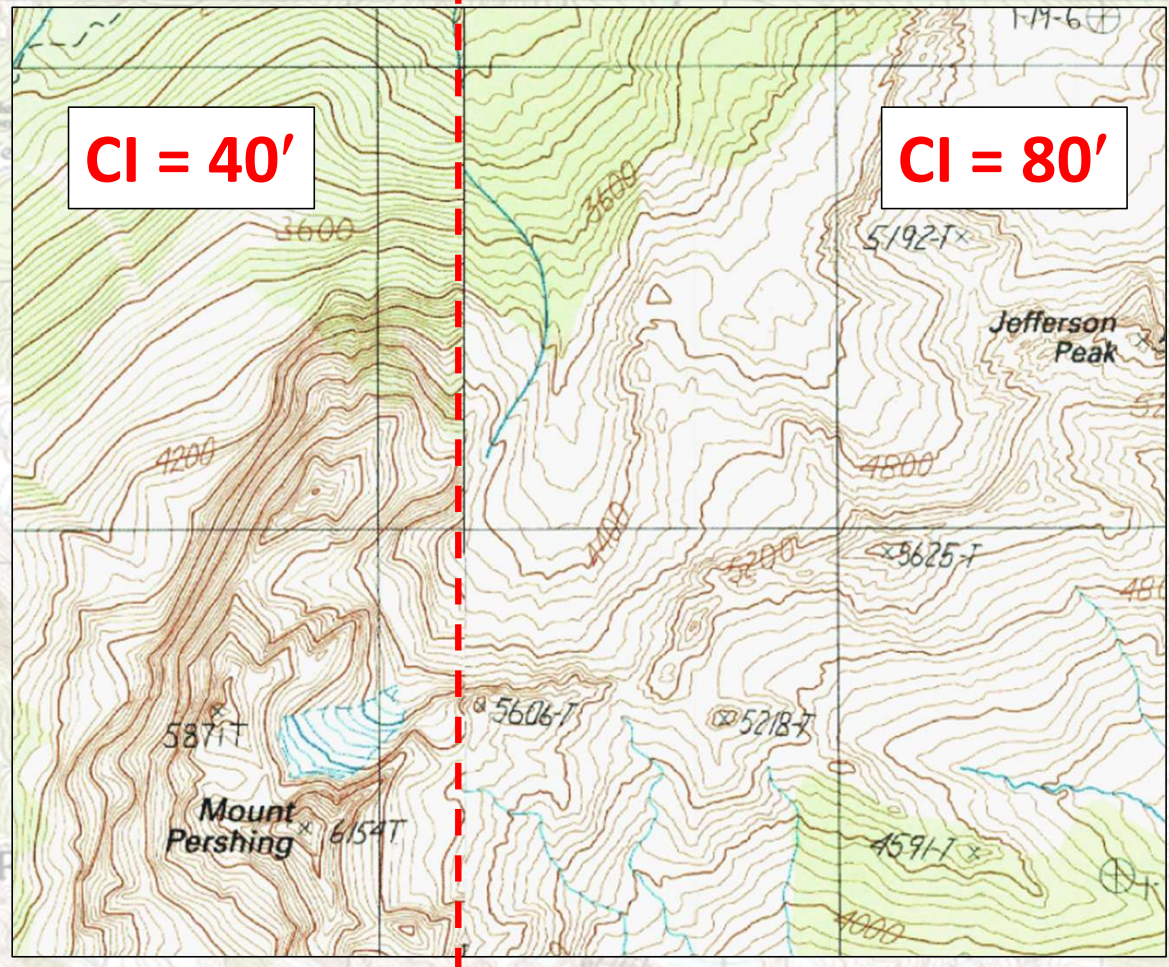
Contour Lines (Elevation)



Contour Interval = 40 ft



Contour Lines: Contour Interval



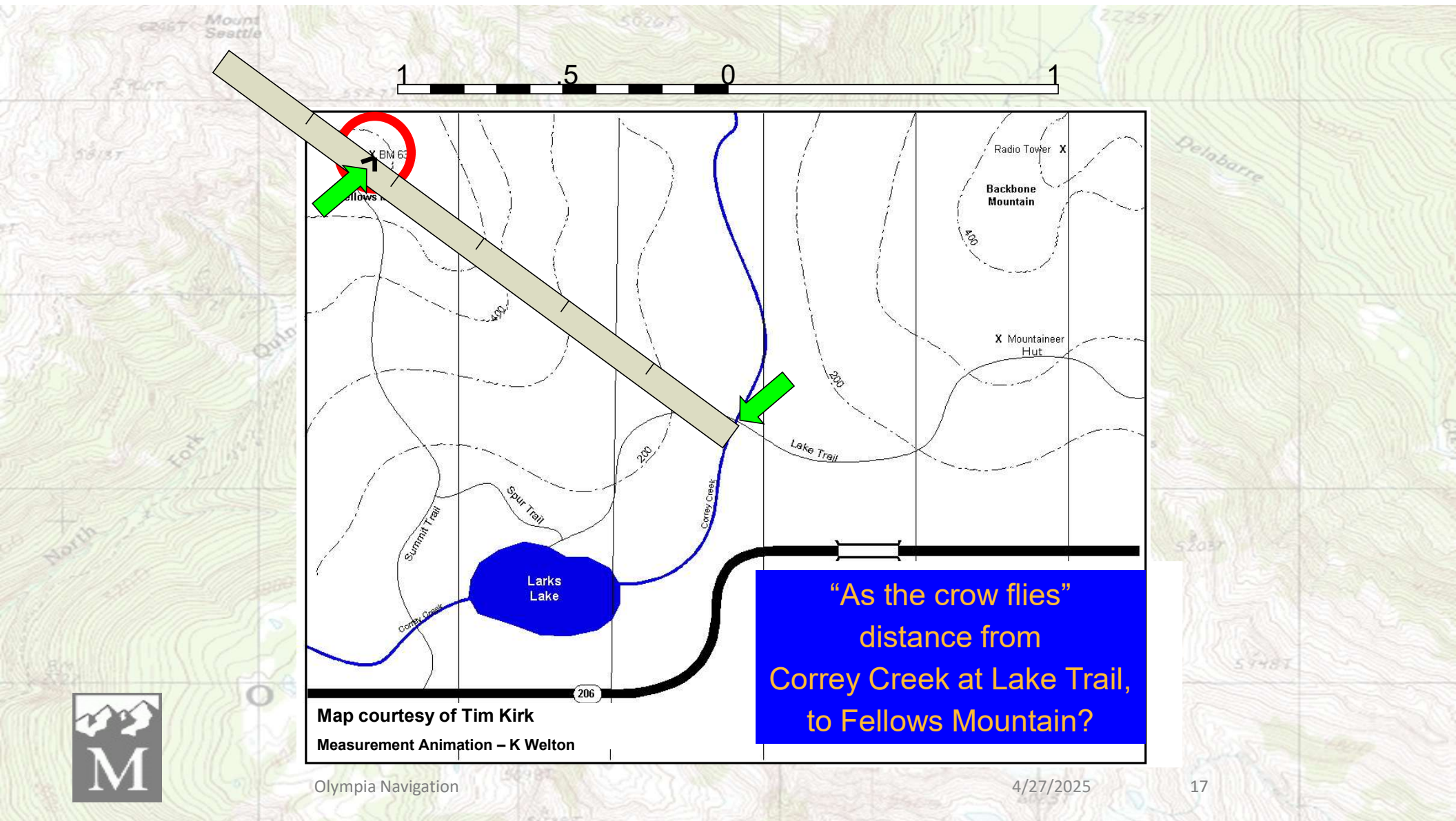
Topographic Maps: Scale and Distance

$$1:24,000 \equiv \frac{1}{24000}$$

Is a Larger Scale than:

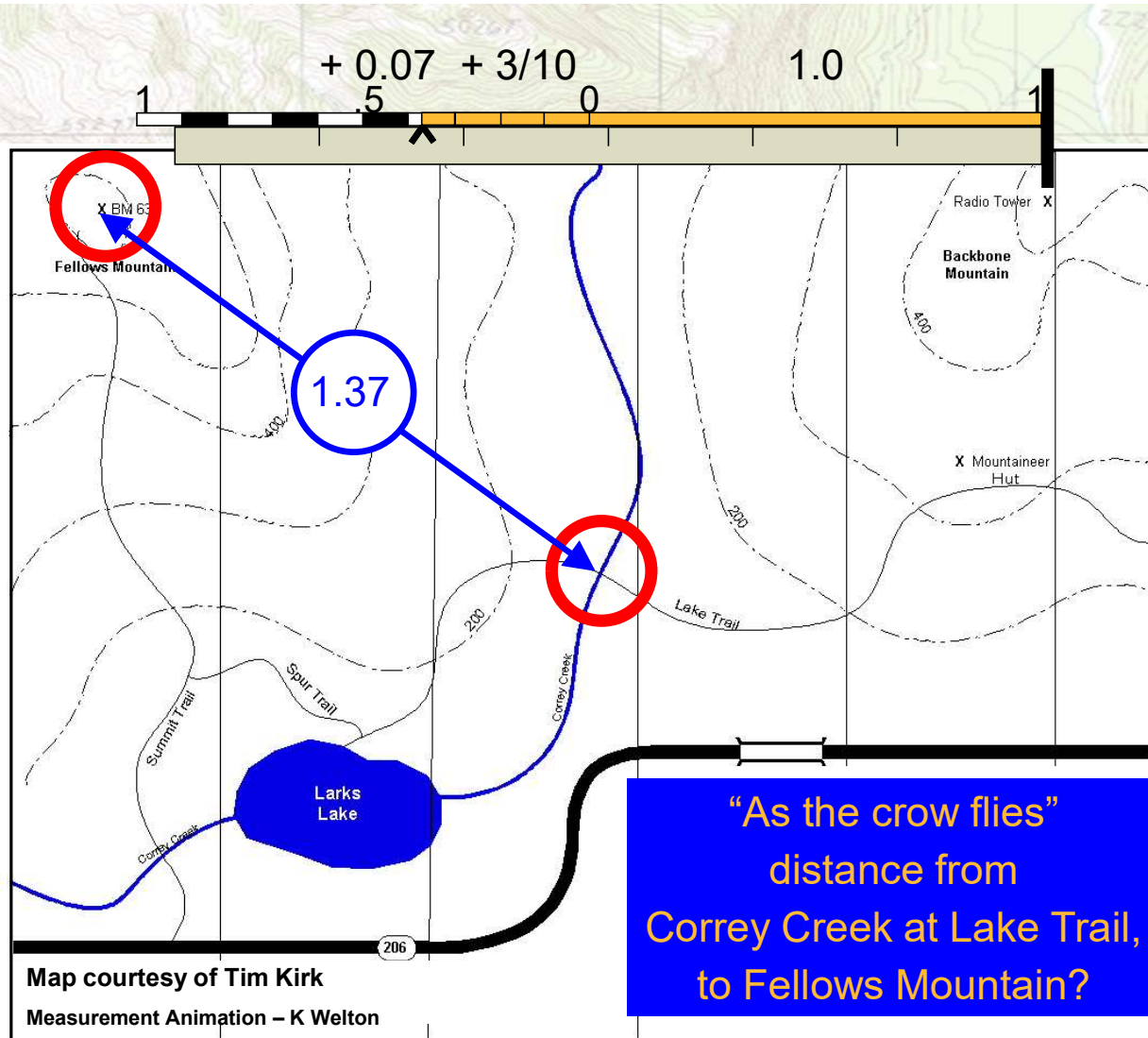
$$1:100,000 \equiv \frac{1}{100000}$$





Map courtesy of Tim Kirk
Measurement Animation – K Welton

"As the crow flies"
distance from
Correy Creek at Lake Trail,
to Fellows Mountain?

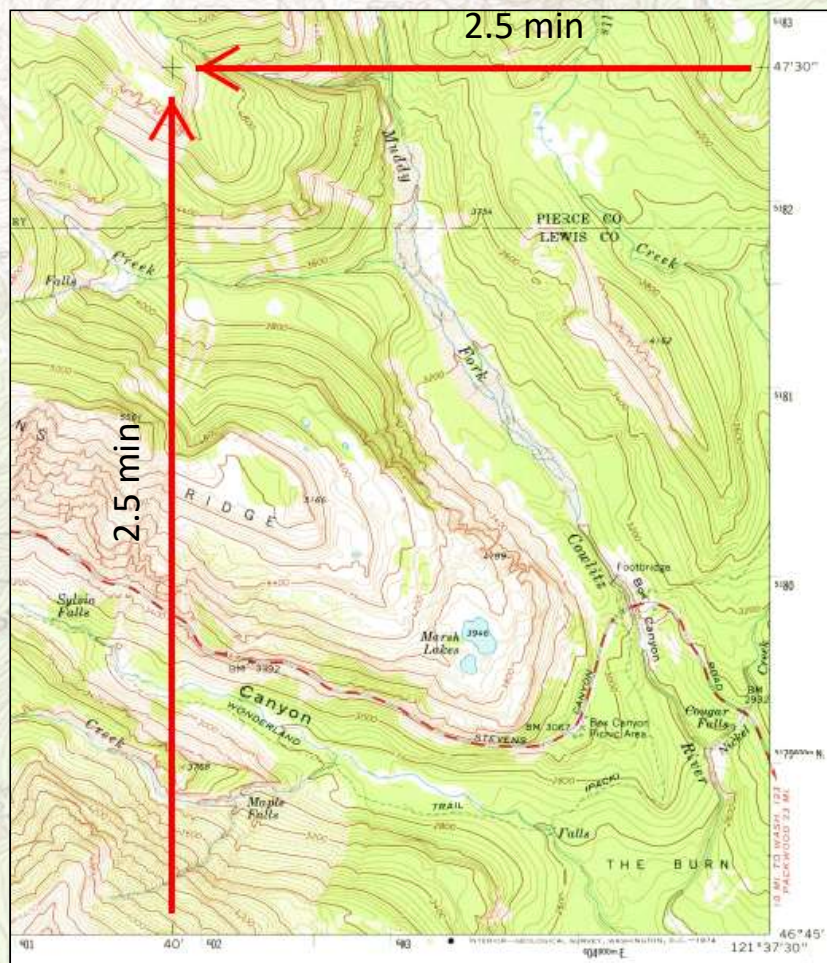


Topographic Maps

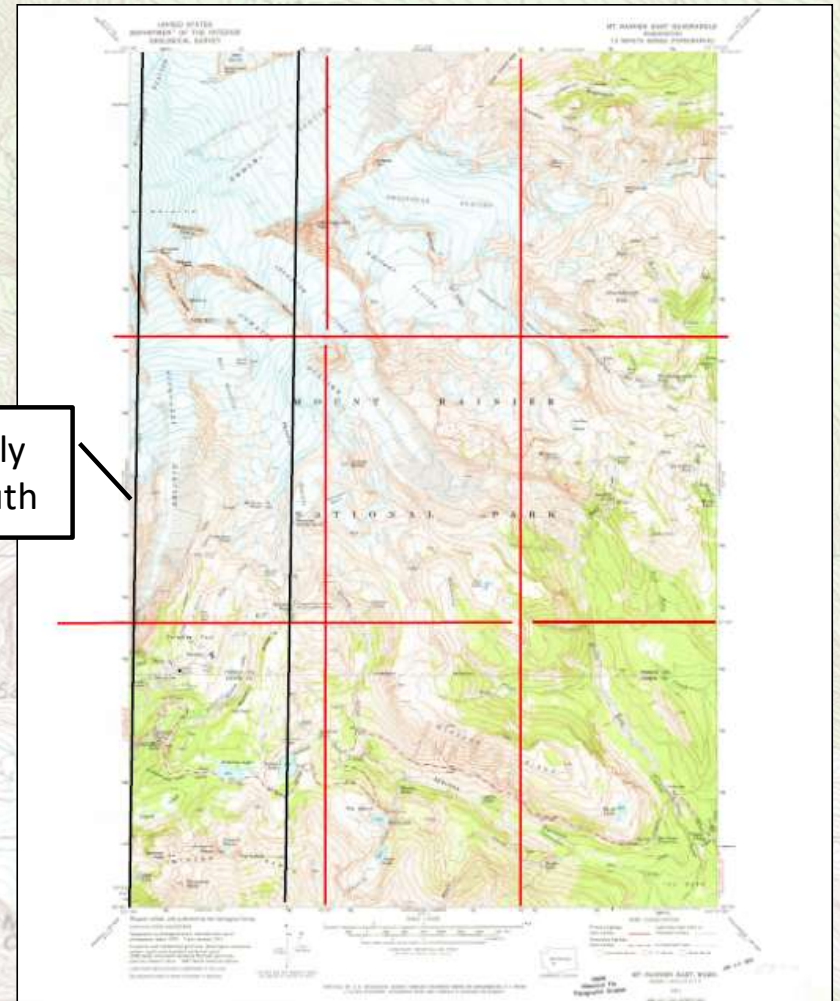
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Topographic Maps: North/South Lines



UTM Generally
not North-South





Questions?



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