Field Data Collection for Critical Cartography of Campus

Purpose

- The learning goals are to:
  - Learn to measure and record conditions at locations
  - Understand the fundamentals of geographic vector point data

Outcome

- All group members should have access to a Google Form and Google Sheet of mapped points by the next Lecture.

Procedure

Technical Constraints

- The technical parameters and constraints for this activity are analogous to the mobility with disability map at https://go.middlebury.edu/mobility
- You will map **geographic point locations** with latitude, longitude coordinates.
- Choose a theme for which you can map **30-40 outdoor point locations** on campus. If your theme has a high density of points, you may choose to map a smaller geographic extent within campus, e.g. one or two quads.
- Each point will have two qualitative attribute field variables:
  1. `normative`, indicating the feature as good or bad for your cause, analogous to the classification of mobility features as `assets` or `barriers`. This field should store only two to three possible values, e.g. {"barrier", "asset"}, or {"poor", "fair", "good"}. These will be represented by **two or three colors**.
  2. `category`, indicating what type of feature it is, analogous to the classification of mobility features such as entrances, steps, slopes, curb dishing, etc. This field could store many different values, but keep in mind that this field will be represented by **shape** and you'll have to choose a unique symbol to represent each one, e.g. the different types of features on the mobility map.

Mobility Example

- For example, the field data collection effort for the Mobility map generated a data table like this:

latitude	longitude	normative	category
44.012455	-73.177380	Barrier	Curb
44.012352	-73.177086	Barrier	Path
44.012286	-73.176572	Asset	Parking
44.012428	-73.177934	Asset	Doorway
44.013115	-73.177571	Barrier	Steps
44.013322	-73.177685	Asset	Ramp
44.013076	-73.180095	Barrier	Path
44.012912	-73.181229	Barrier	Doorway
44.013419	-73.181022	Asset	Doorway
44.013115	-73.177571	Barrier	Steps

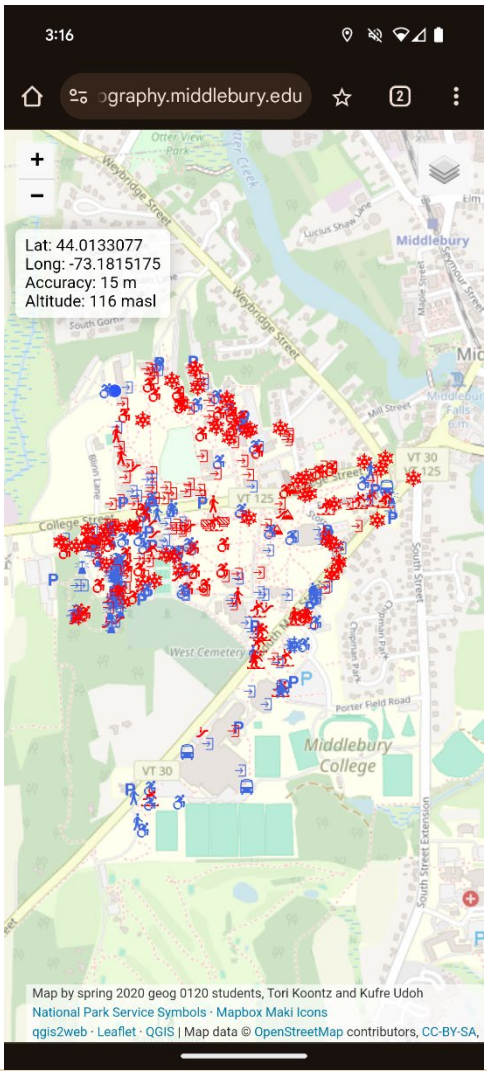
Decide on a theme for your map	• As a group, you will choose a critical cartography theme to map. This theme should allow you to practice critical cartography by representing geographic features that are not typically found or emphasized on mainstream maps and which help raise awareness of or promote a just or sustainable cause. • <u>What cause(s) would you like to promote or bring awareness to?</u> *Write them here:* • <u>What sorts of features do you anticipate locating in the landscape?</u> *Write them here.* • <u>How will you categorize the above features?</u> *Write them here:*
Theme Title	• Write the **final theme** of your map as a **compelling title** here Note: A compelling title reads more like a thesis statement than a description of the topic!
Set up a Google Form	• We will collect data using smart phones with location services enabled and Google Forms. • A Google folder has been set up for each group (see link on today's lesson). • In that folder, create a Google form with the following questions: 1. `latitude` (short answer, with restriction of a number between `43` and `45`) 2. `longitude` (short answer, with restriction of a number between `-74` and `-72` 3. `normative` (multiple choice, with two or three possible values, e.g. "`asset`" and "`barrier`"; or "`positive`" and "`negative`") 4. `category` (multiple choice, based on the list you made above, and with an "other" write-in option in case you find something unexpected)

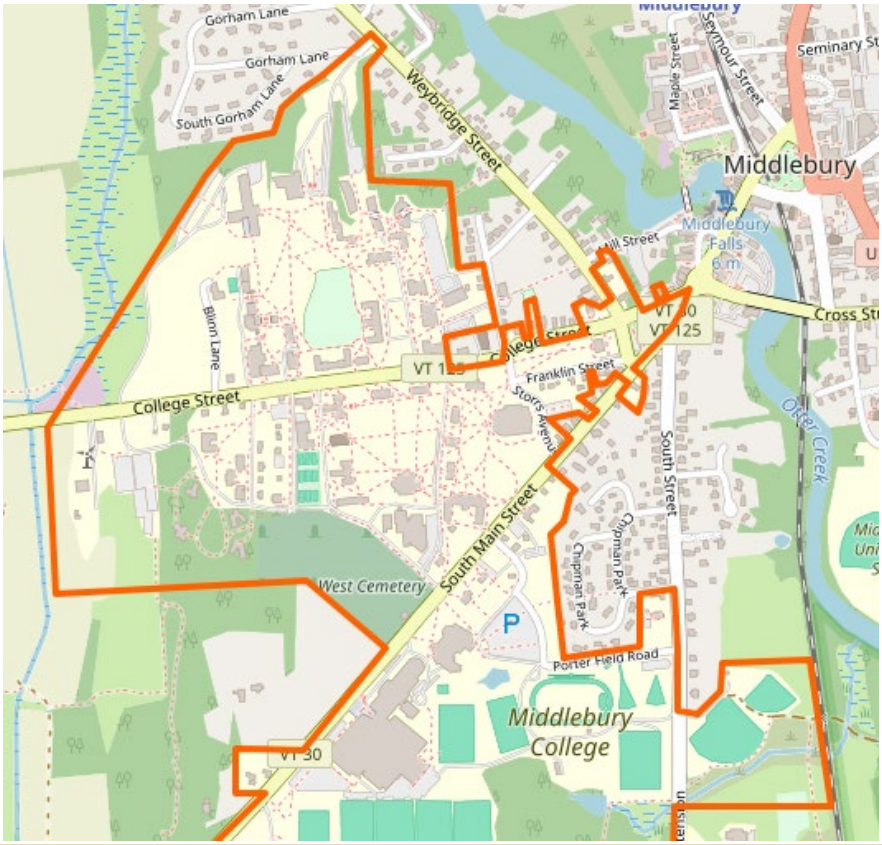
Load a Locator Map

- Make sure that at least one person in the group has a smart phone with location services enabled, and permissions for location services allowed for their web browser.

- This map person should load https://go.middlebury.edu/mobility on their phone.

1) You must enable location services on your phone.
2) You must approve access to location services when you load the map
3) You may turn off the mobility layers for a cleaner map view
4) The map shows you the latitude and longitude where the device is located based on your device's location services.
5) As I stand in BiHall and take the image to right, the **Latitude** is:
   `44.0133077`
   and the **Longitude** is:
   `-73.1815175`
6) **Record the full precision of the coordinates! Do not round the numbers!**



Plan and Implement Data Collection	• Choose a region of campus to focus on. If the features of interest for your theme are sparse, you may need to cover most of campus. If the features are dense, it makes more sense to focus on a quad and all of its surrounding buildings. 1. For reference, there are about 400 points on the mobility disability map 2. Choose an extent that your group can cover with an hour of honest teamwork. • You may subdivide areas of campus for groups of two or three to visit. • Collect an exhaustive set of data points for your chosen region. • Here is the campus boundary to help think about the region and plan data collection: 
Confirm Data in Google Form and Sheet	• Export the data from Google Forms to Google Sheets by going to Responses → Link to Sheets • Each member of the group should have access to a complete Google Form and Sheet in your group's Google Drive folder prior to the next lecture. • Please make sure that you place the data in the correct Day and Group Number!