

Learn it. Do it. Live it!

MAPPING IN THE ZONE



Maps are an important element for some Safe Routes to School activities, especially walking school buses and walkabouts. Maps can provide a clear and compelling picture of important SRTS considerations such as where students live, walking and bicycling routes, and opportunities barriers. Note that each map should be designed for a specific purpose, and will have different elements required to meet that purpose.

This guide explains the basics of making maps, lists some popular map-making tools, and showcases a few good map examples.

ZONE IN, NOT OUT

Zone In, Not Out is a package of resources that can help make school zones safer for all travelers, especially children. The idea for the program was part of an in-person training for Virginia Safe Routes to School local coordinators in the winter 2015. Charged with the task of coming up with a comprehensive approach to school zone safety with branding, messaging, materials, the local SRTS coordinators worked in small groups to develop an outline of the program.



The materials are available for download on the Virginia SRTS program website. The Zone In, Not Out logo can be customized with a school name. The materials offer both 'how to' information and resources for school communities to access for expanded or more in-depth information.



1. MAP ELEMENTS

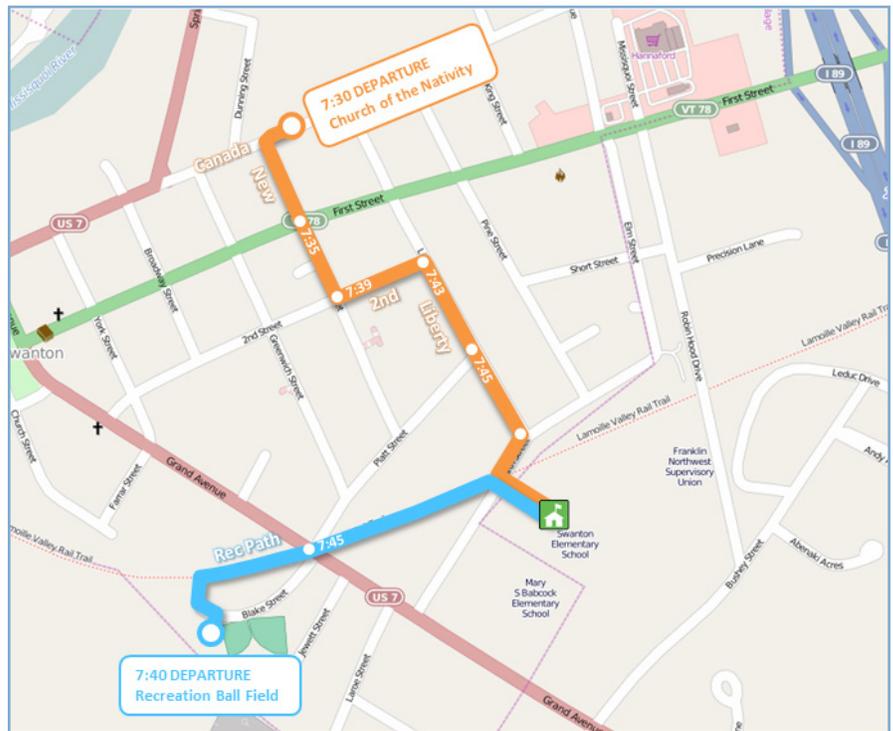
Not all maps look alike. You are telling a story with your map, showing specific information to make your point. Consider the following points when creating your map and use the sample maps in this guide as a reference.

Contrast. There should be enough contrast to easily distinguish elements on the map. Ideally maps should be readable when printed in black and white.

Legibility. All information should be readable. Although your map should include a legend, the symbols on the map should be intuitive enough that readers shouldn't have to constantly refer to it.

Hierarchy. The most important elements should be highlighted. Use of size or contrasting color are two ways to achieve this hierarchy. Street names should be legible but do not need to be as large as the names of walking school bus stops, the school, or other important landmarks.

Clutter: In addition to establishing hierarchy, omit any data that isn't relevant to your map. Having too much information on the map can be confusing to the reader and obscure the message you are trying to convey.



Sample Walking School Bus Map

2. DESIGN TIPS

Before starting your map, decide what information to show. There are basic elements that should be on all maps to make the map clear and easy to read, which are described below. In addition to these basic elements, make a list of items you want to illustrate on your map and develop a symbology for them. For example, you may want to show areas that have sidewalks and areas that are missing sidewalks. One way to illustrate this is by using a green line for areas with sidewalks and a red line for areas where sidewalks are missing. In addition to this list of basic elements, you should add information relevant to your specific map.

Basic Elements for All Maps

- Scale
- North arrow
- School location
- Street names
- Landmarks if applicable

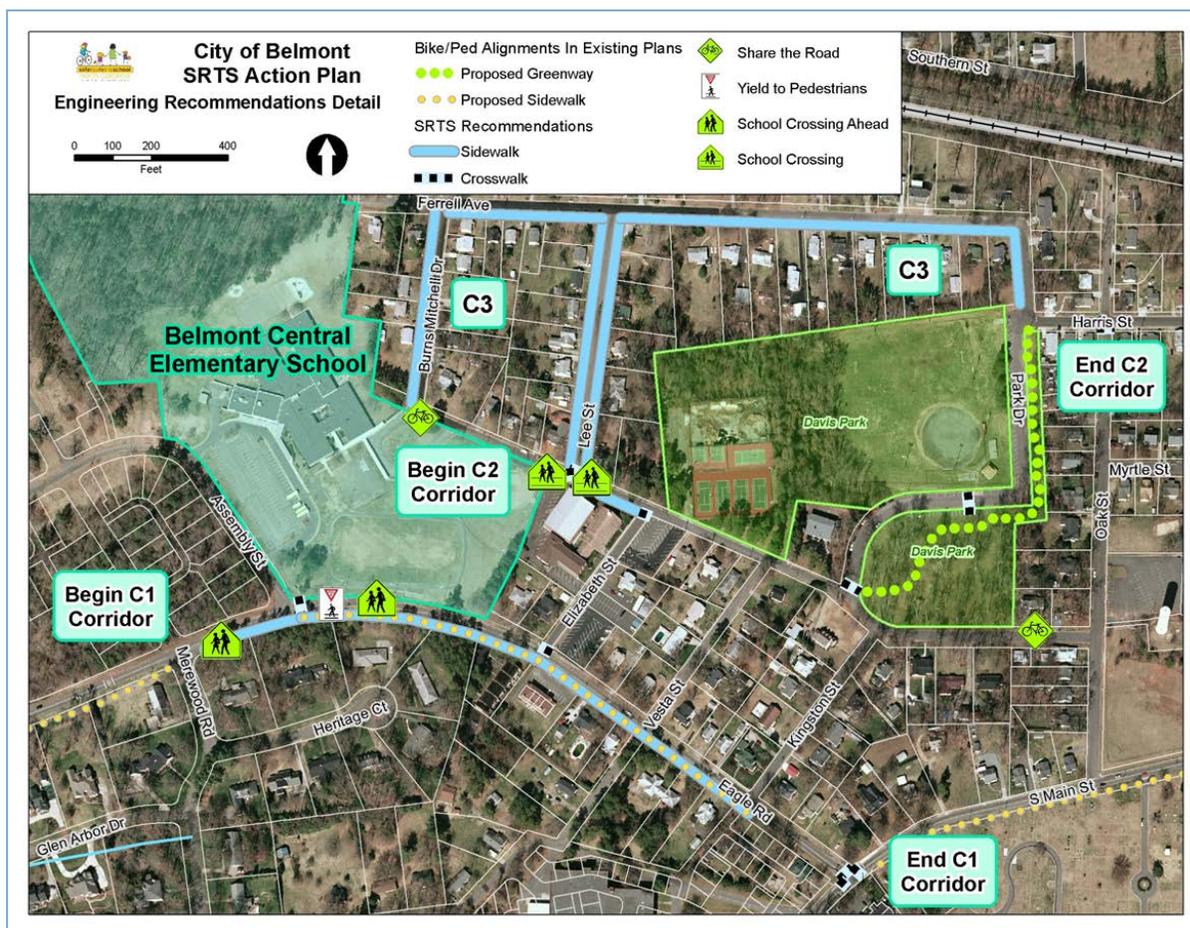
In addition to this list of basic elements, you should add information relevant to your specific map. The following lists are a good starting point for walking school bus maps and walkabout maps. Add any other relevant data to your maps but be sure not to add so much information that the map becomes cluttered and unreadable.

Walking School Bus

- Walking school bus start and end points
- Walking school bus "stops"
- Time at each "stop"

Walkabout Map

- Sidewalks
- Driveways
- Crosswalks
- Crossing guard locations
- Traffic control devices (such as traffic signals, stop signs and yield signs)

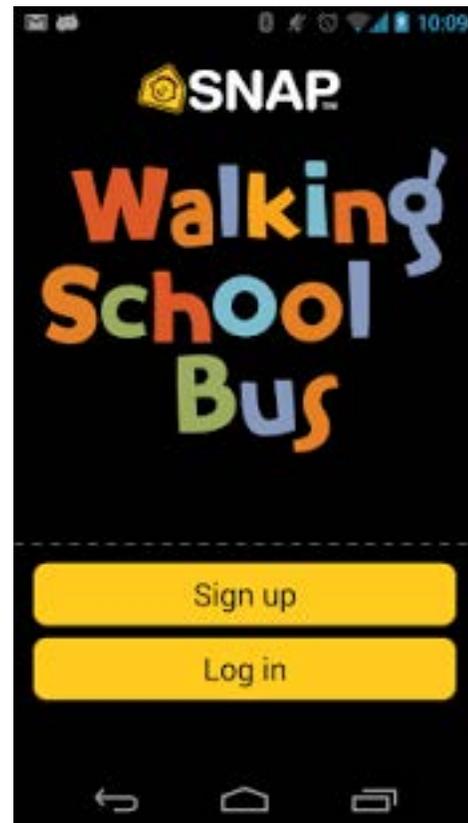


Sample Walkabout Recommendations Map

3. MAPPING TOOLS

There are a variety of tools you can use to create a map. You can draw a map by hand, use drawing software, or specific mapping programs to create your maps. There are many other mapping programs or applications that you can explore to find the tool that works best for your program. A few of these are described below.

- **Google maps:** Google's "My Maps" program allows you to create and store maps online. These maps are easy to make and share, and as many people are familiar with the Google Maps interface, easy to interpret. Section 4 of the LDL provides step-by-step instructions for creating Google maps. www.google.com/mymaps
- **Microsoft Powerpoint:** Powerpoint is a commonly used presentation software that can be used to draw basic maps. You can insert an image of a base map and use the program's drawing tools to add walking school bus routes, walkabout observations, or other elements. Section 5 of this LDL provides steps-by-step instructions for creating maps in Power Point. <https://products.office.com/en-us/powerpoint>
- **ArcMap:** ArcMap is a mapping program used to create detailed maps and conduct spatial analysis. Your municipal planner may be able to help create a map using ArcMap. www.arcmap.com
- **Adobe Illustrator:** Illustrator is a drawing program that can be used to draw maps. It has more capabilities than Powerpoint, however, for simple maps, Powerpoint may be a more efficient option.
- **Paper map:** You can mark routes or observations on a paper map and distribute photocopies to interested parties. Drawing a paper map is an easy option for creating a map, however, these maps are difficult to edit if elements change in the future.
- **Mobile apps:** The Utah Department of Transportation developed a mobile application to manage walking school bus routes for its Safe Routes to School Program. You can discuss the possibility of creating a mobile app with your school district or DOT. <http://www.udot.utah.gov/snap/CommonAccess/WalkingSchoolBus.php?id=25>

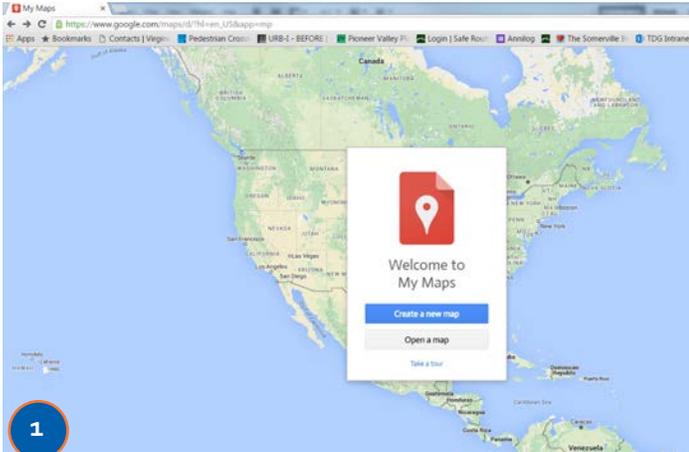


UDOT Walking School Bus Mobile App

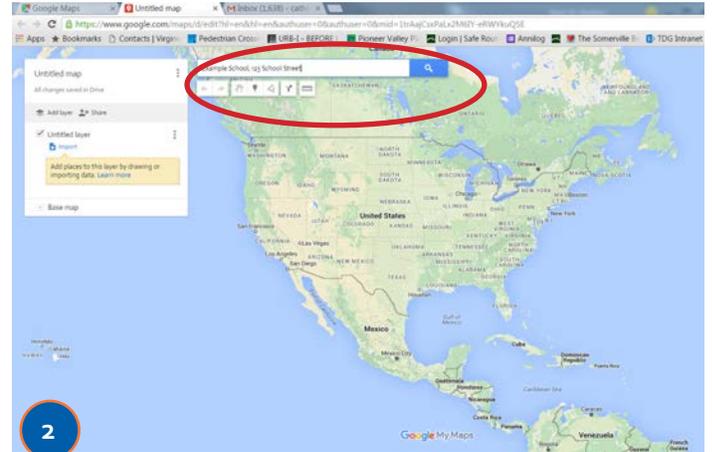
4. GOOGLE MY MAPS STEP BY STEP

Making a map with Google's MyMaps is a simple way to make a walking school bus map, walkabout map, or other map. Google maps are easy to make and easy to share with others. A free Gmail account is required.

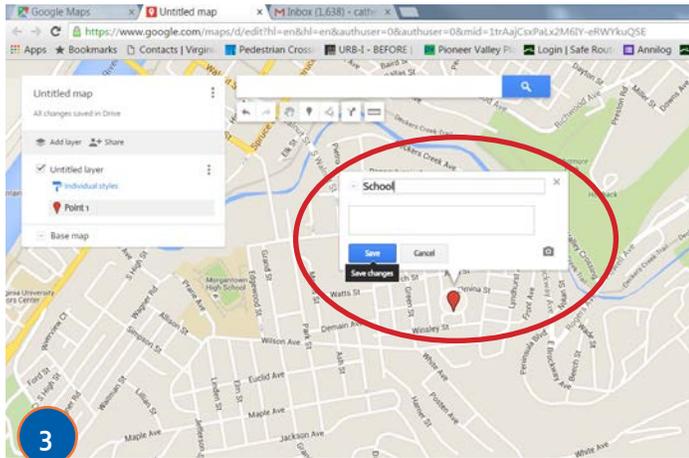
Follow these steps to create your map.



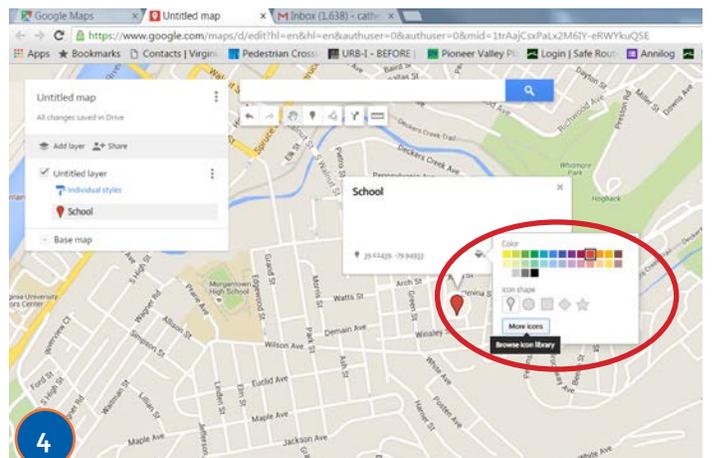
Go to www.google.com/mymaps
Select "Create" to create a new map.



Enter your school's address to zoom to that location.

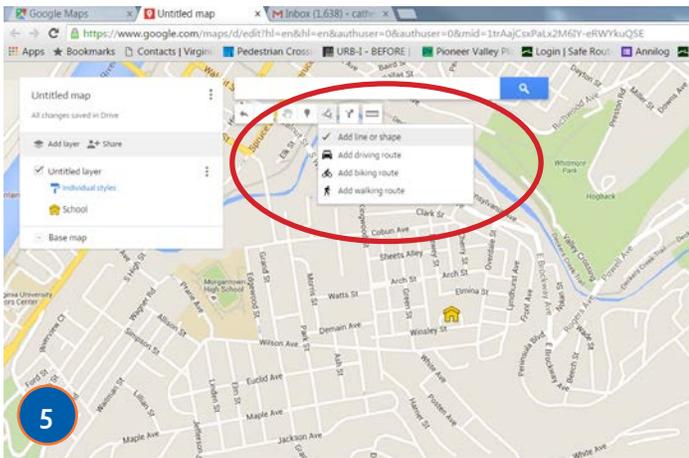


Type the name of your school in the pop-up box on the location pin.

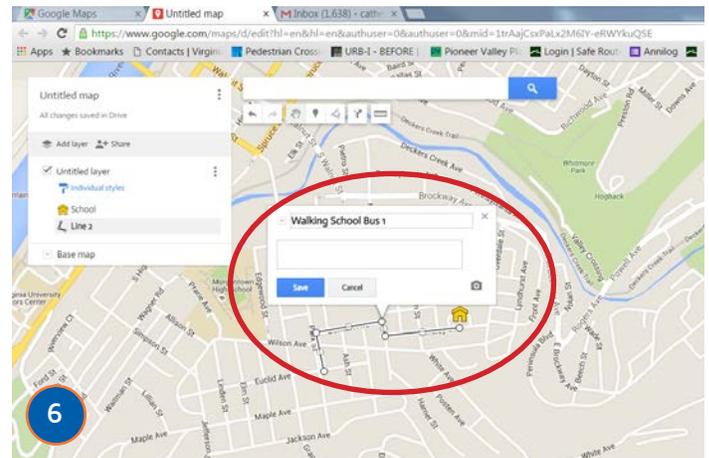


You can change the color of the line by clicking on the paint bucket icon and change the weight of the line using the slider bar below the color choices.

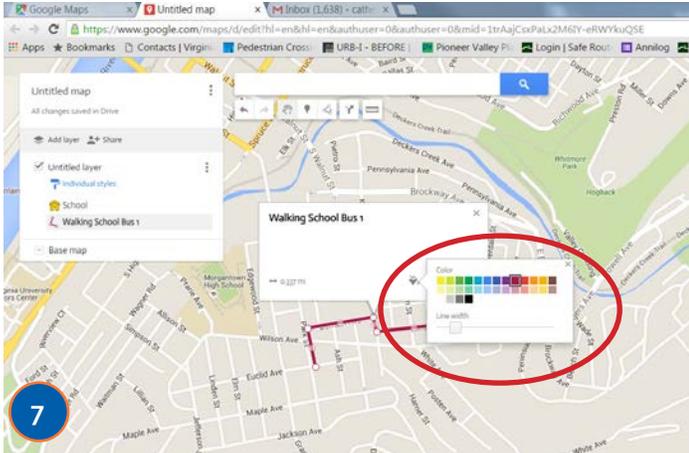
4. GOOGLE MY MAPS STEP BY STEP (CONTINUED)



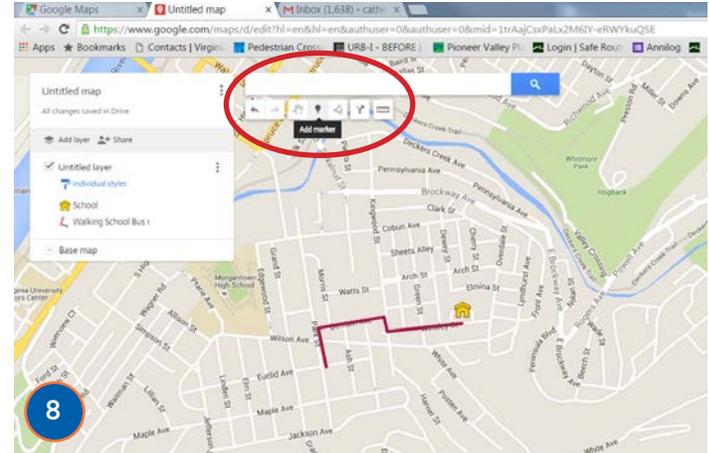
Select the pin tool to create stops on your walking school bus route.



Enter the name of your stop and the time the walking school bus will stop at that location. Insert additional stops using the pin tool.

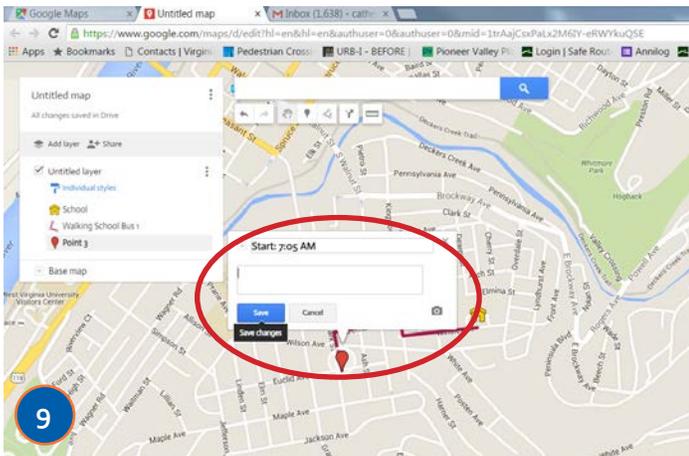


You can change the color of the pin by clicking on the paint bucket icon or change the pin symbol by clicking on "more icons." This will allow you to use the pin tool to mark crossing guard locations or other important information.

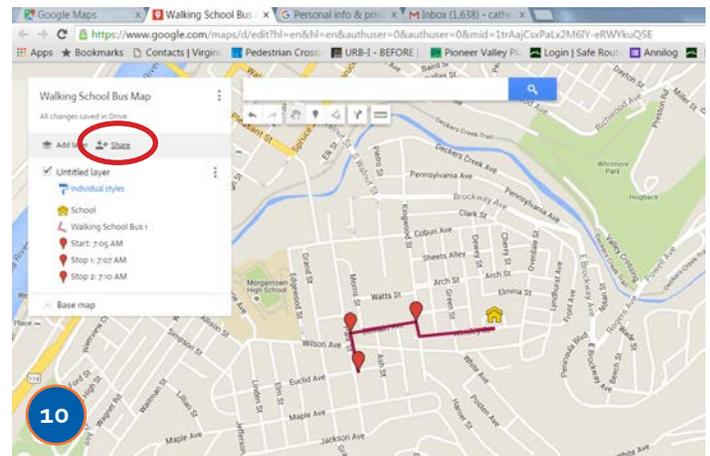


Select the line tool and draw your walking school bus route.

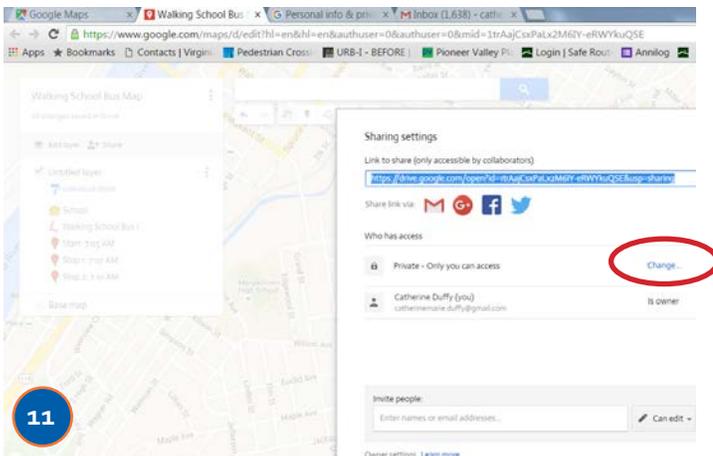
4. GOOGLE MY MAPS STEP BY STEP (CONTINUED)



Name the route.



Once you have added all your stops and any additional walking school bus routes, you can share your map. Click "Share" in the toolbar.

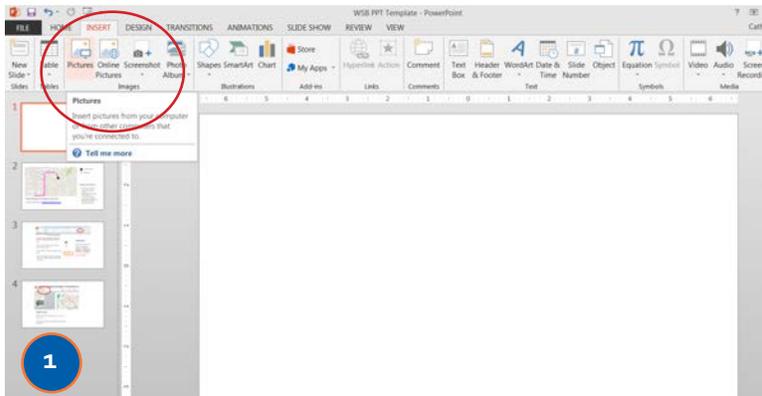


Click "Change" in the settings box to change your privacy settings. Select "Anyone with link can view." Then copy and paste your link and share with walking school bus leaders and families.

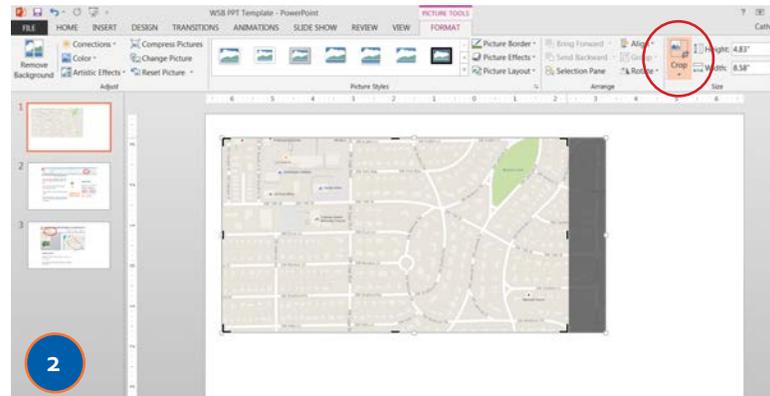
5. POWERPOINT MAPS STEP BY STEP

Microsoft Powerpoint is a good tool to use to make walking school bus maps and walkabout or observation maps. Powerpoint allows more opportunities to customize than an online mapping tool (such as Google Maps), however, one person must be in charge of saving the map file and updating as needed.

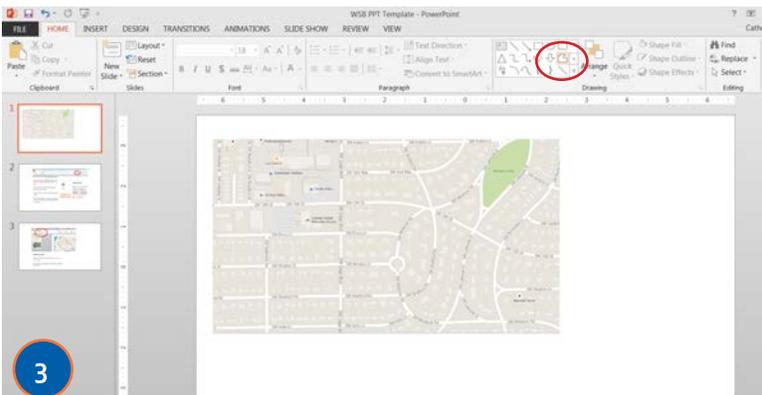
Follow these steps to make a walking school bus map.



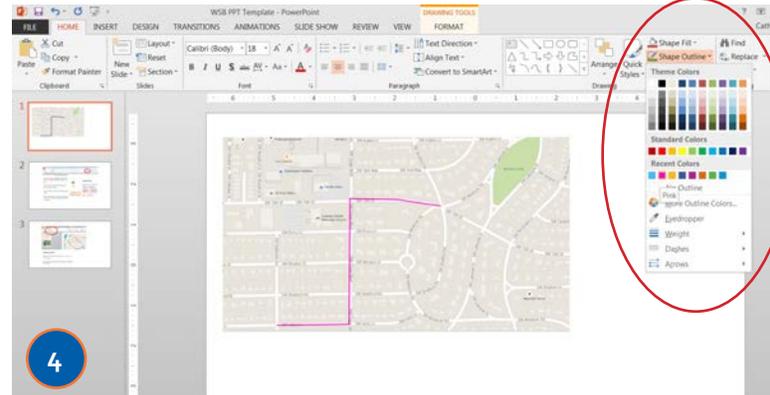
Open a new Powerpoint file and insert an image of a map around your school. You can use an online mapping tool, such as Google Maps or Open Street map.



Once you have inserted your map image, crop the map to fit the screen, using the crop tool under the Format tab. Note that the Format tab only appears when you have selected an image on your slide.

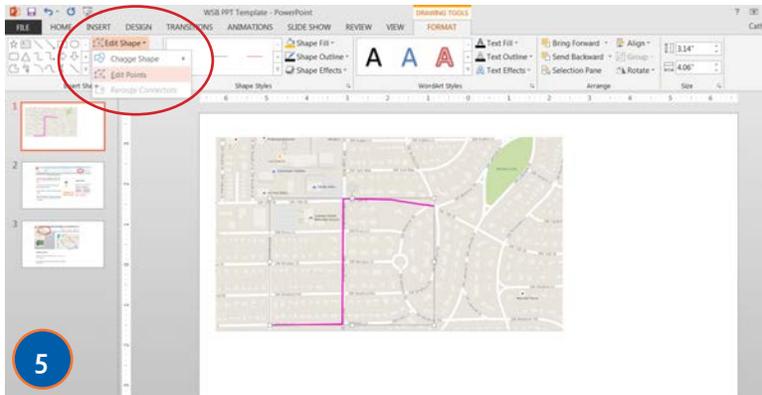


Use the Freeform tool to make lines for the routes. Draw the line and double click when finished to end.

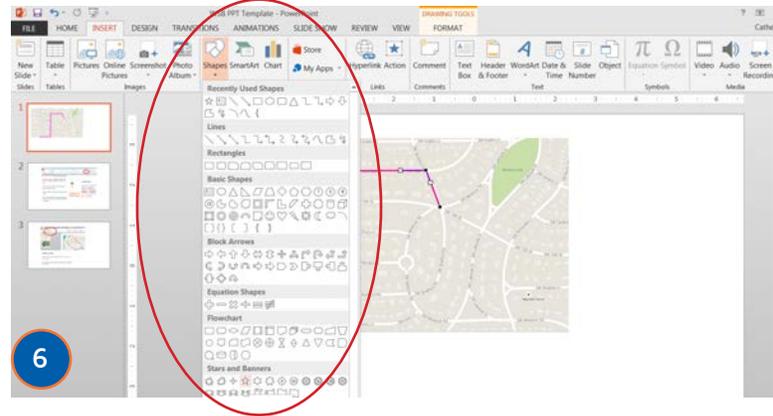


You can change the width and color of your line by selecting Shape Outline in the Format tab.

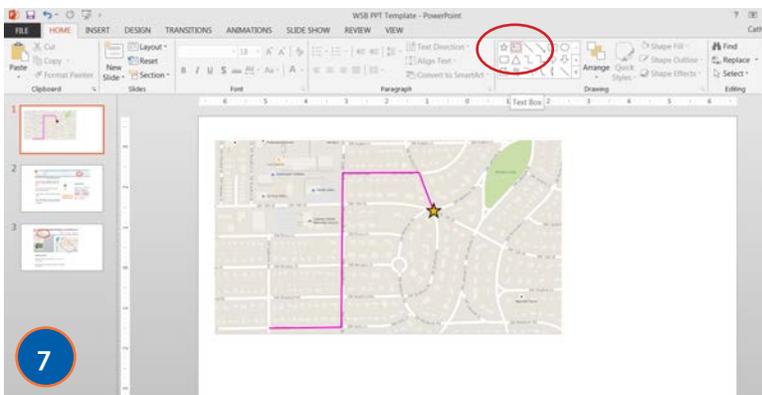
5. POWERPOINT MAPS STEP BY STEP (CONTINUED)



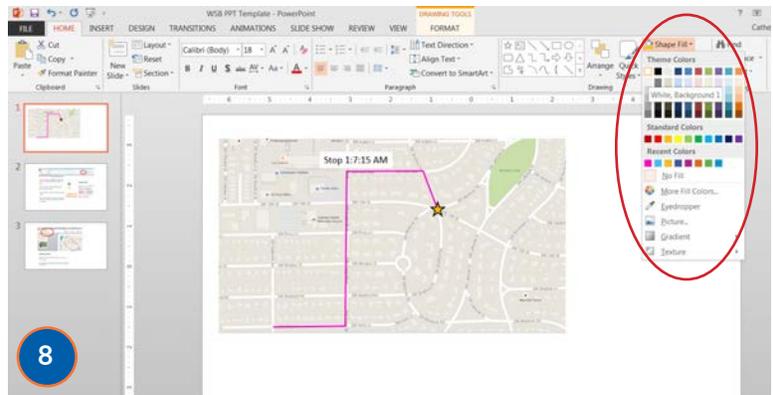
To edit your line, click on the line and then click "Edit Shape"/ "Edit Points" under the Format tab on the left-hand side. You can now move the points on that line to change the shape.



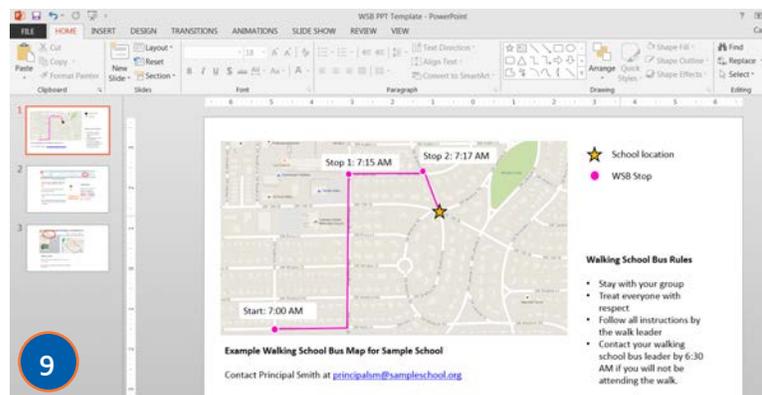
You can insert shapes, pictures or other images to add information to your map. This example uses a star shape to show the school location.



Use the Text Box tool under the Insert tab to add labels and other information to your map.



You can change the color of the text box to make the text stand out on top of the map. White is usually a good color to use.

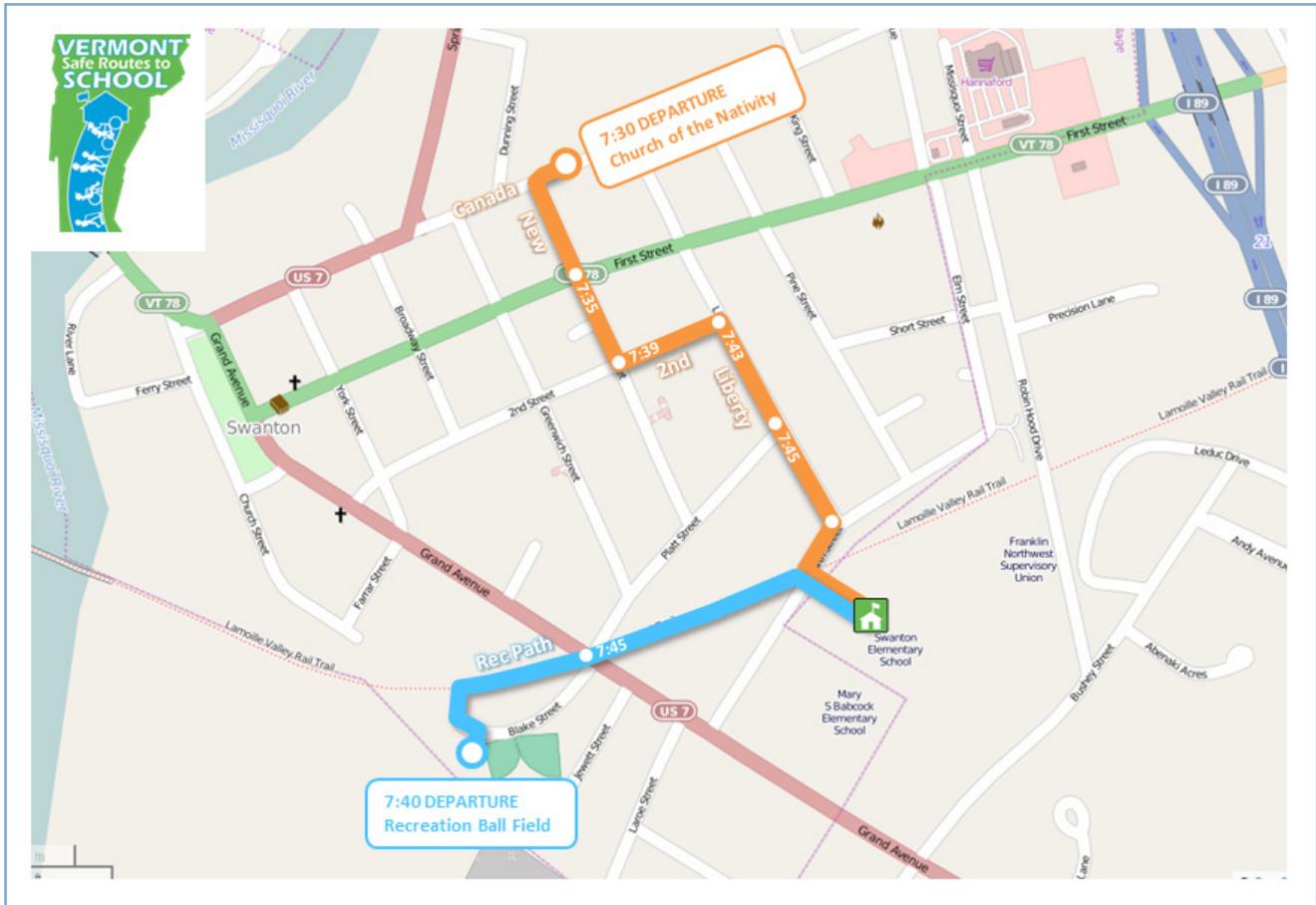


Add a legend and any relevant information, such as contact information and walking school bus rules to complete your map.

6. MAP EXAMPLES

The following are examples of Safe Routes to School maps. Note that there are many different ways to make a great map!

Walking School Bus Map



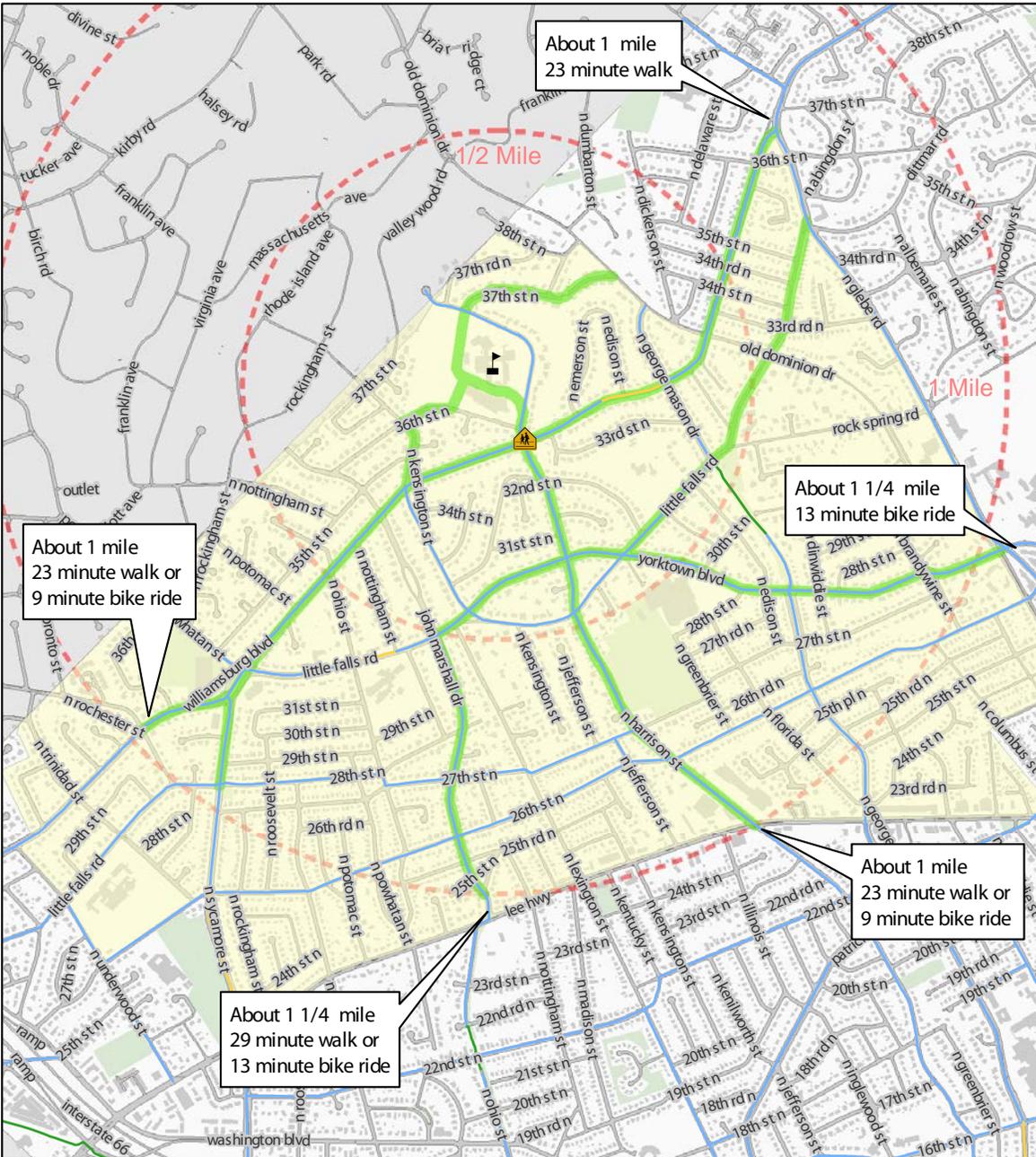
Tool Used: Powerpoint

Walking and Biking Routes Map

Williamsburg Middle

Example Walking & Biking Routes to School

Note: Most streets contain sidewalks.
Routes below provide examples/route times

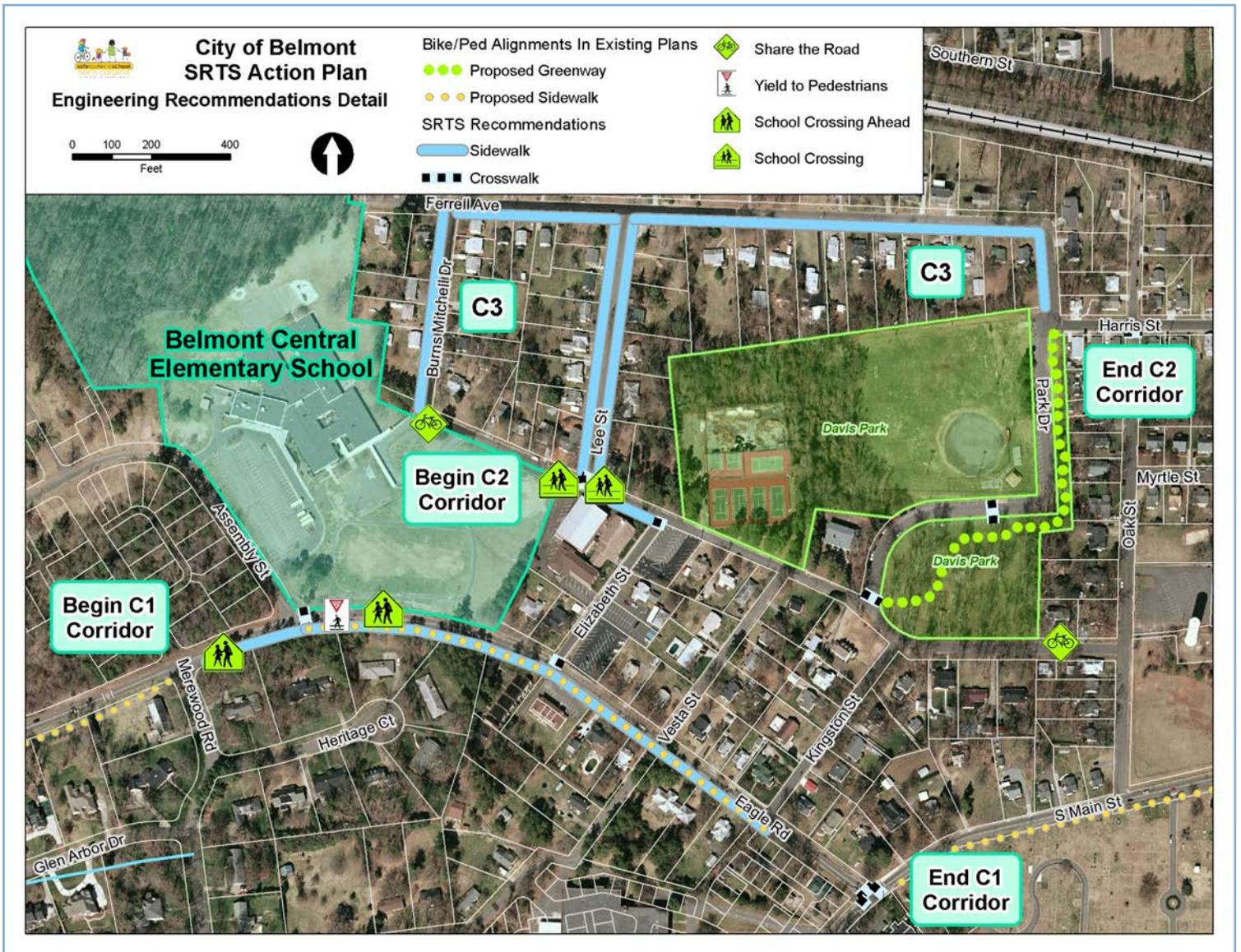


- Off Street Trail
- Shared Lane Marking
- Marked or Suggested Bike Route
- Williamsburg Effective Walk Zone
- Crossing Guard
- Example Walking & Biking Route

This map is a guide to help parents select a route for their student to walk or bike to school. You should preview the route with your child to ensure it is the safest route between your home and school, and teach your child to obey traffic safety rules along the route. Local authorities do not supervise the routes on this map and are not responsible for students while they travel to/from school.

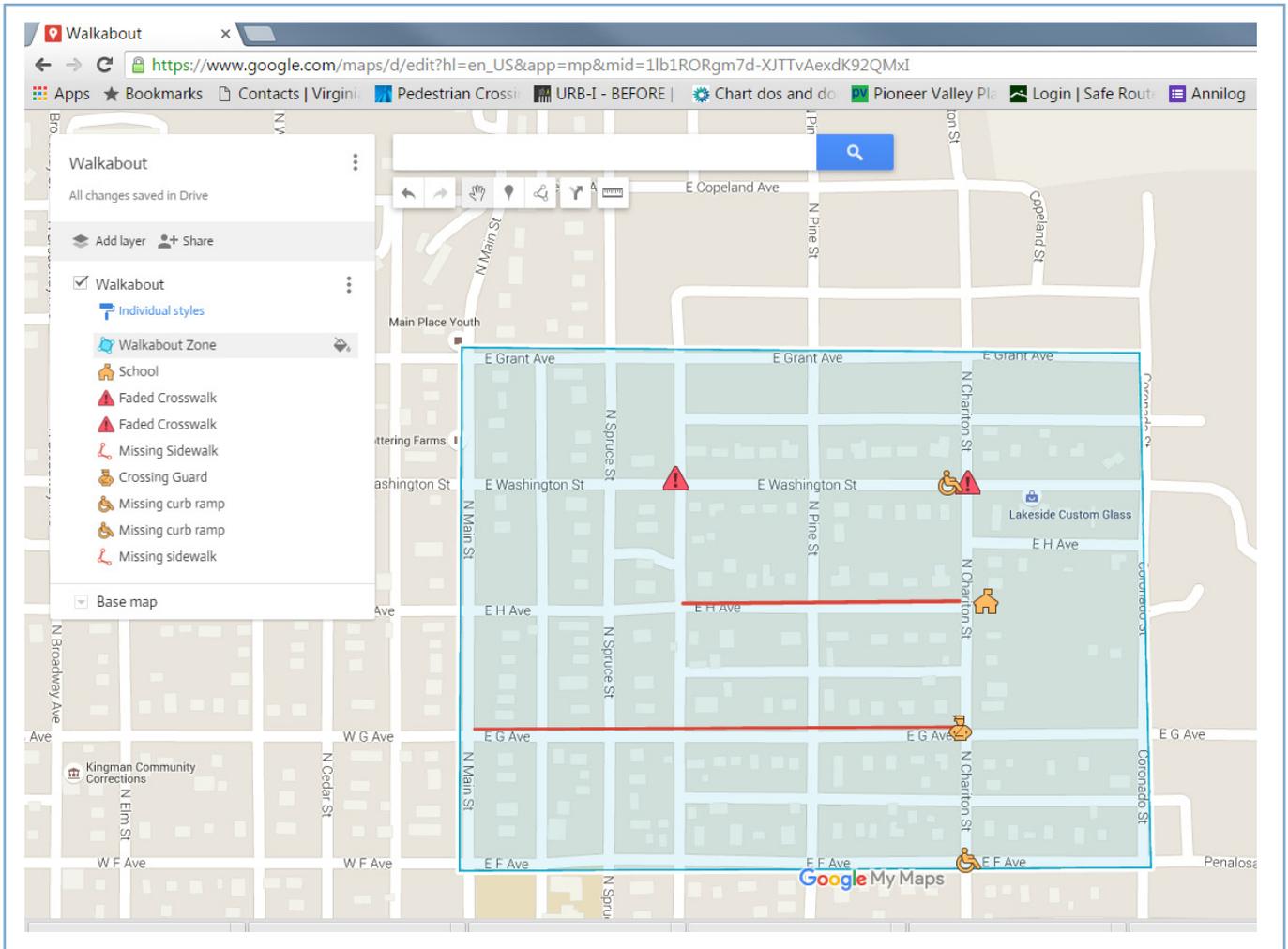
Tool Used: ArcMap

Engineering Recommendations Map



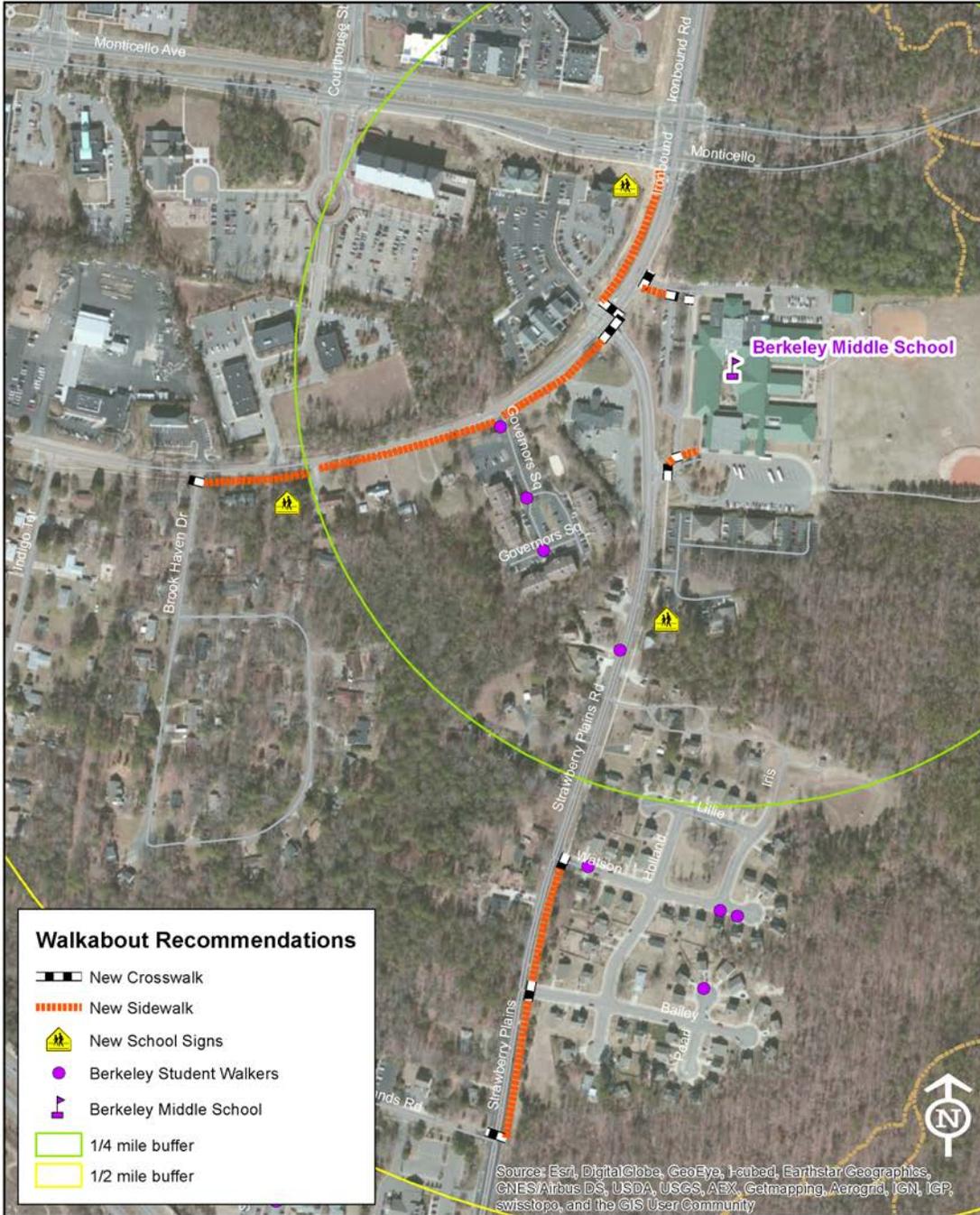
Tool Used: Adobe Illustrator

Walkabout Map



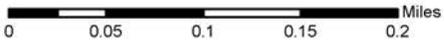
Tool Used: Google Maps

Berkeley Middle School



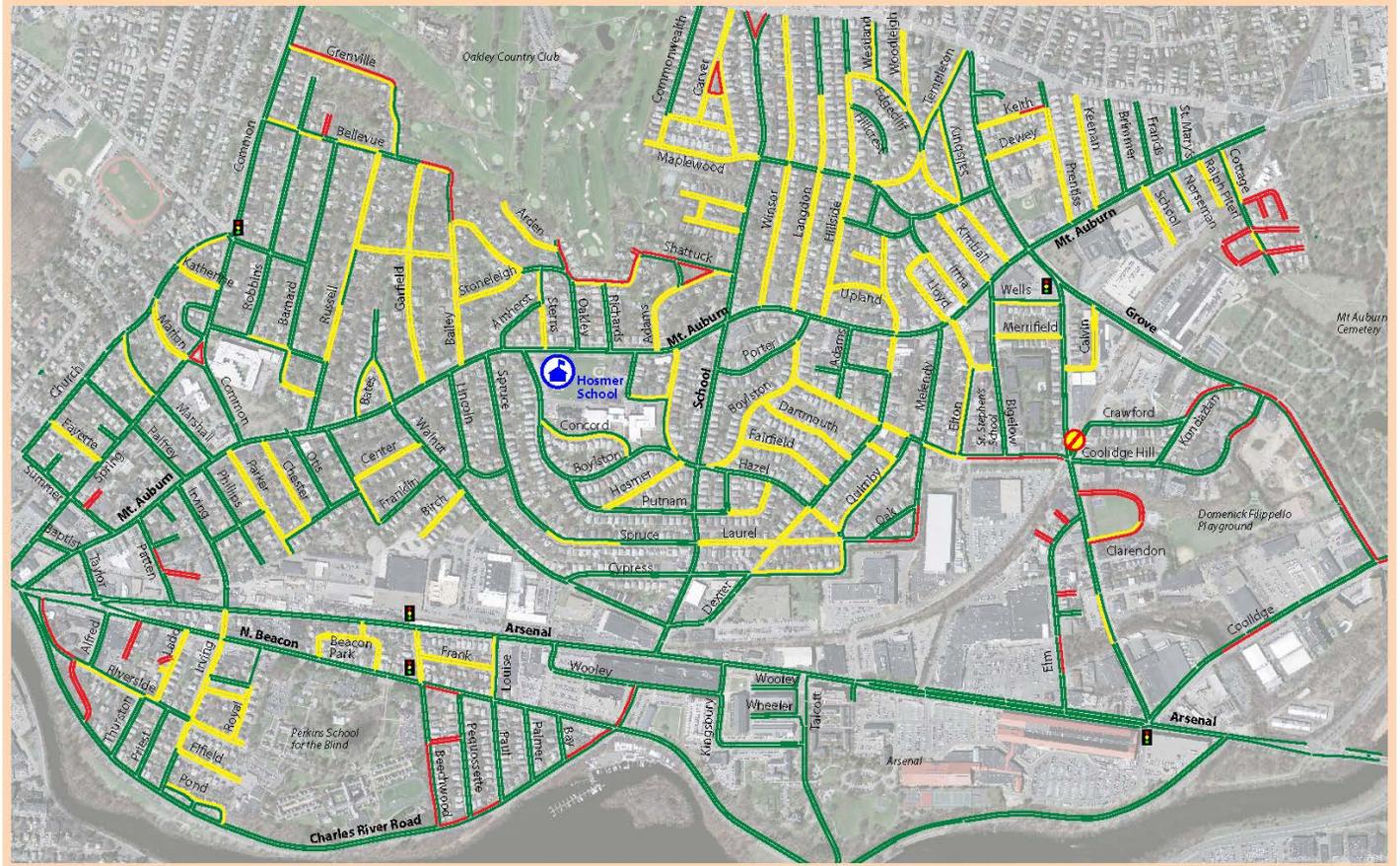
- Walkabout Recommendations**
- New Crosswalk
 - New Sidewalk
 - New School Signs
 - Berkeley Student Walkers
 - Berkeley Middle School
 - 1/4 mile buffer
 - 1/2 mile buffer

Note: The aerial photo in this map was taken before the most recent sidewalk improvements in front of Berkeley Middle School.



Tool Used: ArcMap

Infrastructure Inventory Map



1" = 850'

Existing Conditions Around Hosmer Elementary School

Note: Streets not marked were not observed during the site visit.

KEY

- | | | | |
|--|----------------|--|-----------------------|
| | Traffic signal | | Sidewalk with curb |
| | Crossing guard | | Sidewalk without curb |
| | | | No sidewalk |

Tool Used: Adobe Illustrator