Using Dance Place's Map Tool

This paper presents examples of documenting, displaying, and discussing the social impact of Dance Place through the use of geographic maps. Nine cultural arts organizations, all part of the Space for Change award program administered by Leveraging Investments in Creativity (LINC),[1] participated in this study by providing budgetary data, programming information, and data regarding visitors and programming clientele. We provide examples of how visitor and clientele address data can be mapped geographically and used in various settings from internal management discussions to part of grant applications.

The map tool created for Dance Place was developed to assist the organization in documenting and articulating its school outreach program. The map tool can be found on Dance Place's 'front page' of our web site at http://web.williams.edu/Economics/ArtsEcon/DancePlace.html. There you will find a Dance Place map option with an overlay of Census variables for Washington DC, and a map option with an overlay of Census variables for a five mile (local) radius around Dance Place.[2] We offer the choice because one geographic region may be of more interest than the other in writing particular types of reports. Sometimes it would be more useful to show where in Washington DC one is reaching students; other times the attraction of students in the local area may be of greater interest, particularly since Dance Place is located only two miles from the Maryland border. In this paper we will work with the Washington DC map, but everything presented here also applies to the 5 mile radius map.

We do not provide interpretations of the many interesting aspects of Dance Place's online map here. Rather this paper provides examples of how to use the online, interactive map tool to explore some of the questions about Dance Place's neighborhood and school outreach program that might arise. This brief paper provides information on how to use the online mapping tool to:

- change the Census variables displayed on the map;
- turn off and on the markers of the school outreach program;
- add new address data to the map; and
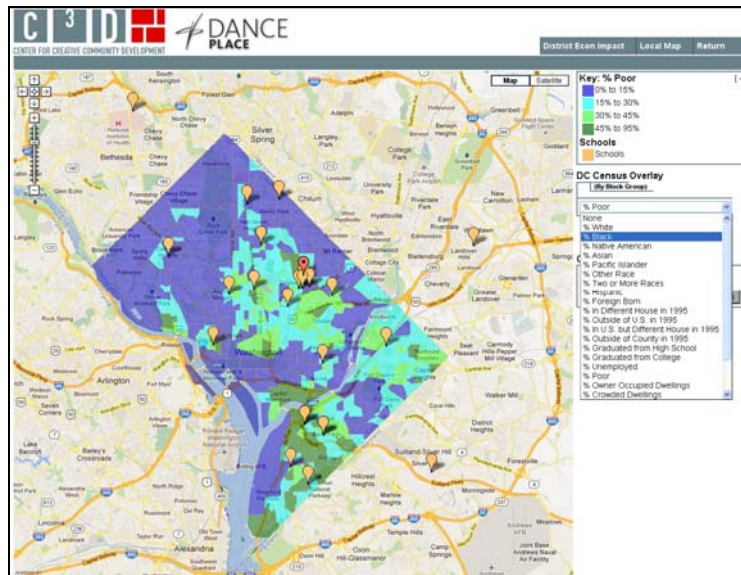- create a copy of the map to include in a report.

How to change the Census variables displayed on the map

Dance Place's interactive map has 23 Census variables available for viewing. The default variable when the map opens is '% poor'. Clicking on the drop-down box in the right-hand window provides the list of Census variables, as shown in Figure 1.

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[1] For additional information on the Space for Change program see http://www.lincnet.net/artist-space/ford-foundation-planning-and-pre-development-grants, accessed 2/21/2012.
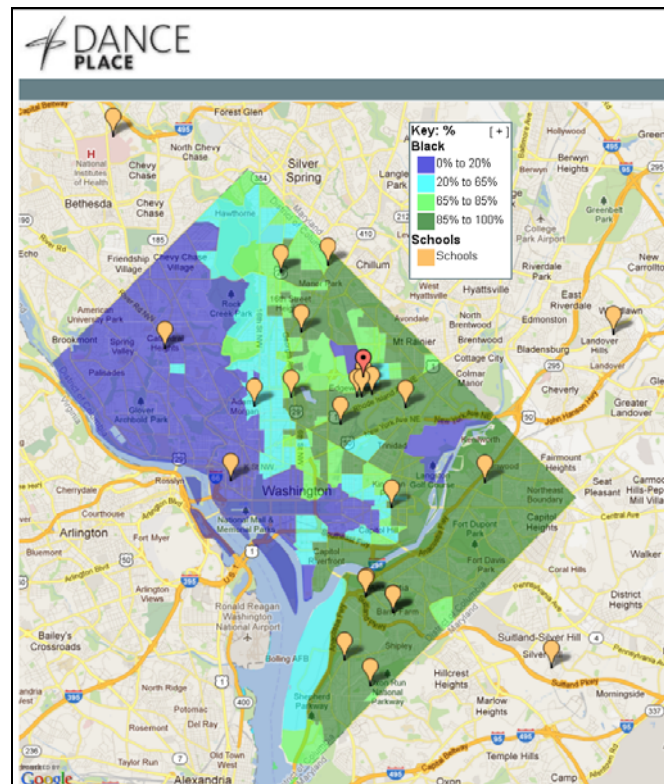
[2] The Census overlay does not make a perfect circle with 5 mile radius around Dance Place. It shows all Census block groups with any part falling within a 5 mile radius; this explains the slightly more irregular display.

Figure 1: Change the Census Variables Displayed on the Map

On the interactive map, select '% Black' from the list. Zoom in on the map to better differentiate block groups around Dance Place. The result is shown in Figure 2, which presents Census block groups shaded according to the percent Black, and light orange markers for the schools where Dance Place has outreach programs. Clicking on a marker opens a bubble with the name and address of the school, along with the option of viewing archived photos in Google Streetview.

Figure 2: Dance Place Outreach Schools and Percent Black

The ethnic composition of Washington DC is distinctive, although not unique to US cities; the western side of the District has a very low percentage of Blacks as residents (less than 20%), while the eastern side of the District has a very high percentage of Black residents (greater than 85%). The bright turquoise strip in the middle separates the two areas.

How to turn off and on the markers of the school outreach program

When Dance Place's interactive map opens, the default is that it has markers identifying the location of schools with outreach programs. There may be times, however, (such as in Figure 4 below) when a map without the outreach schools may be preferable. Turning off the markers is quite easy. In the right-hand window, just above the button labeled 'Geocode' is a box with the label 'Hide Schools'. Checking this box temporarily removes the markers of outreach schools. To turn the outreach schools' markers back on again simply uncheck the 'Hide Schools' box.

How to add new address data to the map

In order to describe how to add new data to Dance Place's map, we must work with a hypothetical situation. For the hypothetical case, we will shift our attention from ethnicity to educational attainment. The Obama administration[3] and the Center for Disease Control (CDC)[4] have teen pregnancy prevention initiatives with education as a cornerstone. Dance Place has developed an active touring program to area schools with a strong educational component aimed at "guiding children in becoming responsible teens and adults."[5] Dance Place is well positioned to extend its outreach program as part of the White House and CDC initiatives.

Dance Place, in writing a grant proposal, might focus on areas where fewer residents have high school degrees, and might propose expanding its outreach program to middle schools in those areas. The interactive map created for Dance Place shows where it currently has school outreach programs. For a new initiative such as our hypothetical one, let's choose the variable '% Graduated from High School' and add to the map the location of all the middle schools in Washington DC.

Click the 'Geocode' button and a new window opens. Addresses of District middle schools can be copied and pasted into the Geocoder box from many sources such as an Excel spreadsheet or a Notepad text file. For the example below we pasted addresses of eighteen middle schools in Washington DC.[6] The addresses do not need to be formatted in a special way, just one address per line. Within the Geocoder box, choose whether you want large markers or small for the addresses (we chose large) and the color of the markers (we chose red). Figure 3 shows what the computer screen for Dance Place's interactive program looks like at this point.
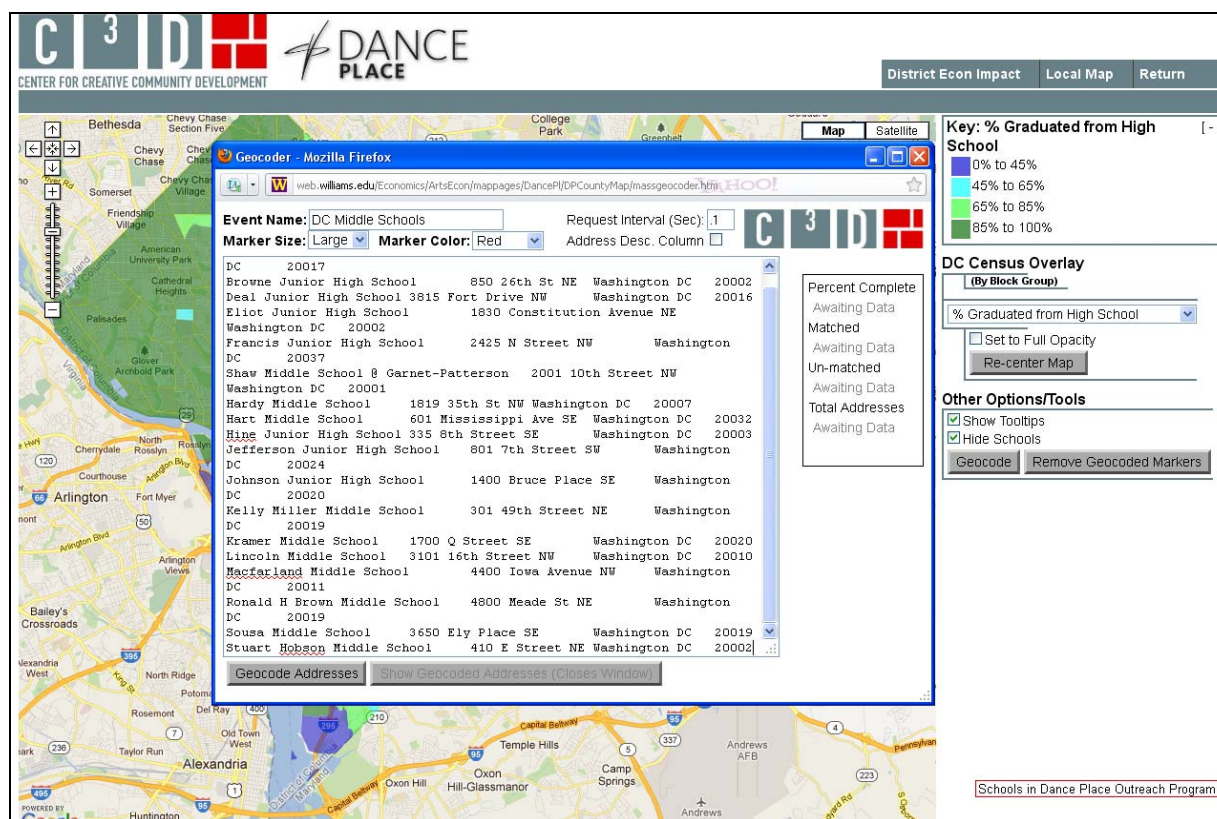
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[3] See http://www.whitehouse.gov/omb/blog/09/06/08/BuildingRigorousEvidencetoDrivePolicyCite, accessed 2/21/2012, for the statement from the White House on its new emphasis on tying funding dollars to programs that measure and demonstrate program effectiveness.

[4] For more information on the CDC initiative see http://www.cdc.gov/TeenPregnancy/PreventTeenPreg.htm, accessed 2/21/2012.

[5] See http://www.danceplace.org/in-our-community/, accessed 2/10/2012.

[6] "We used addresses of public middle schools provided by The Washington Post at http://projects.washingtonpost.com/dcschools/list/, accessed 2/20/2012. The list of addresses is provided in Appendix A so that you can practice with the Geocoder. While we use only Middle Schools in this example, the Washington Post lists all the public schools in Washington DC.

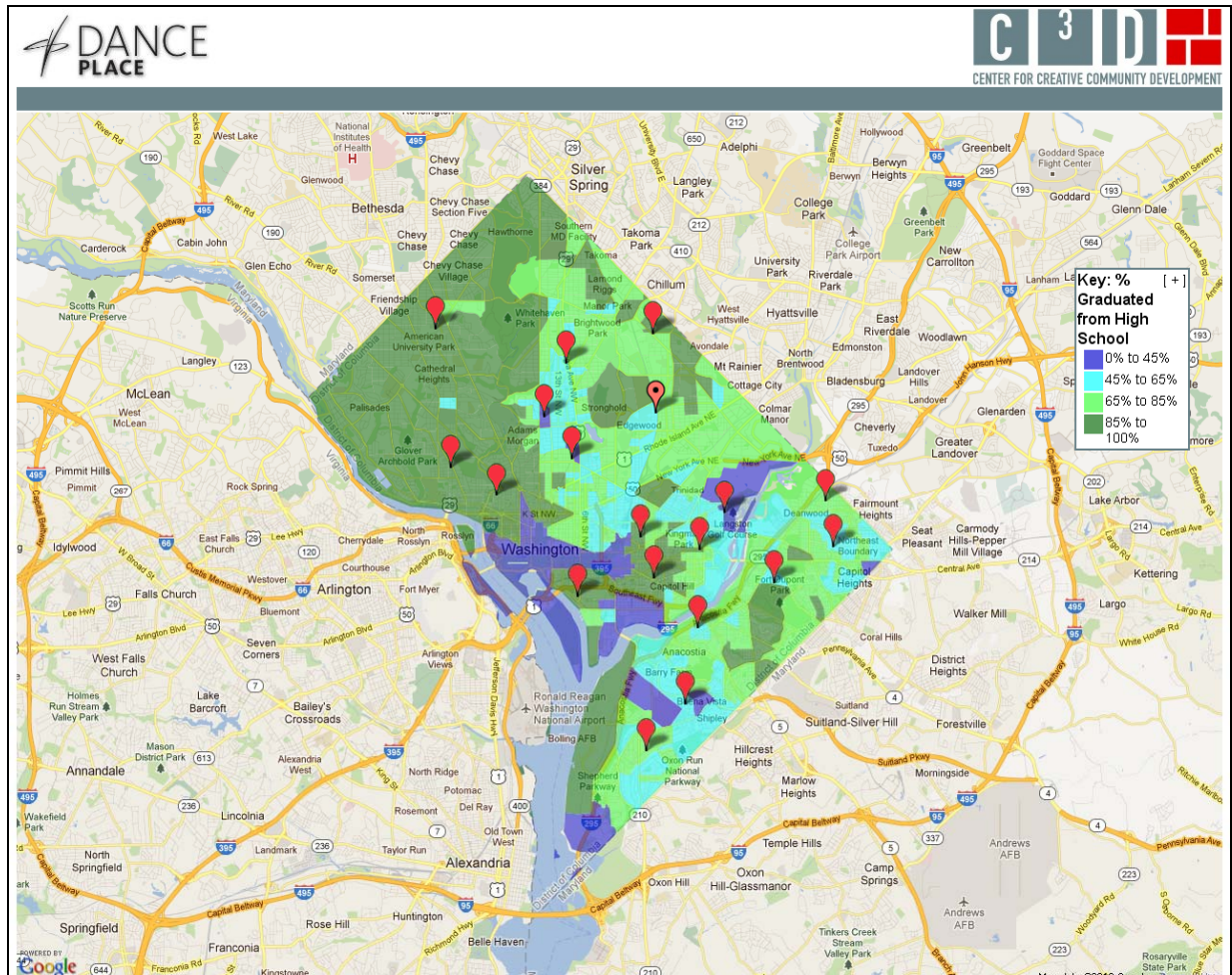**Figure 3: Adding Washington DC Middle School Locations**

Now click the 'Show Geocoded Addresses' button. The Geocoder box closes and the new addresses are visible on the map. The middle schools can be shown by themselves or with the Dance Place outreach schools. Figure 4 shows the addresses of middle schools in Washington DC mapped with '% Graduated from High School' Census data.

The markers in Figure 4 identify the locations of middle schools in Washington DC. The Census block groups are shaded according to the percentage of residents age 25 and older who have graduated from high school. The block groups shaded dark purple and bright turquoise have lower percentages of adults with high school degrees. Dance Place might choose to focus on expanding its school outreach program to middle schools in or near those areas[7]. Clicking on any of the red markers opens a bubble with the name and address of the school. In most cases there is also the option of viewing archived photos of the area through Google Maps Streetview.

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[7] In this map most of the dark purple Census block groups appear to have very few residents; they include things such as a golf course, the National Mall, and the Navy Yard. We would recommend focusing on the bright turquoise Census block groups.
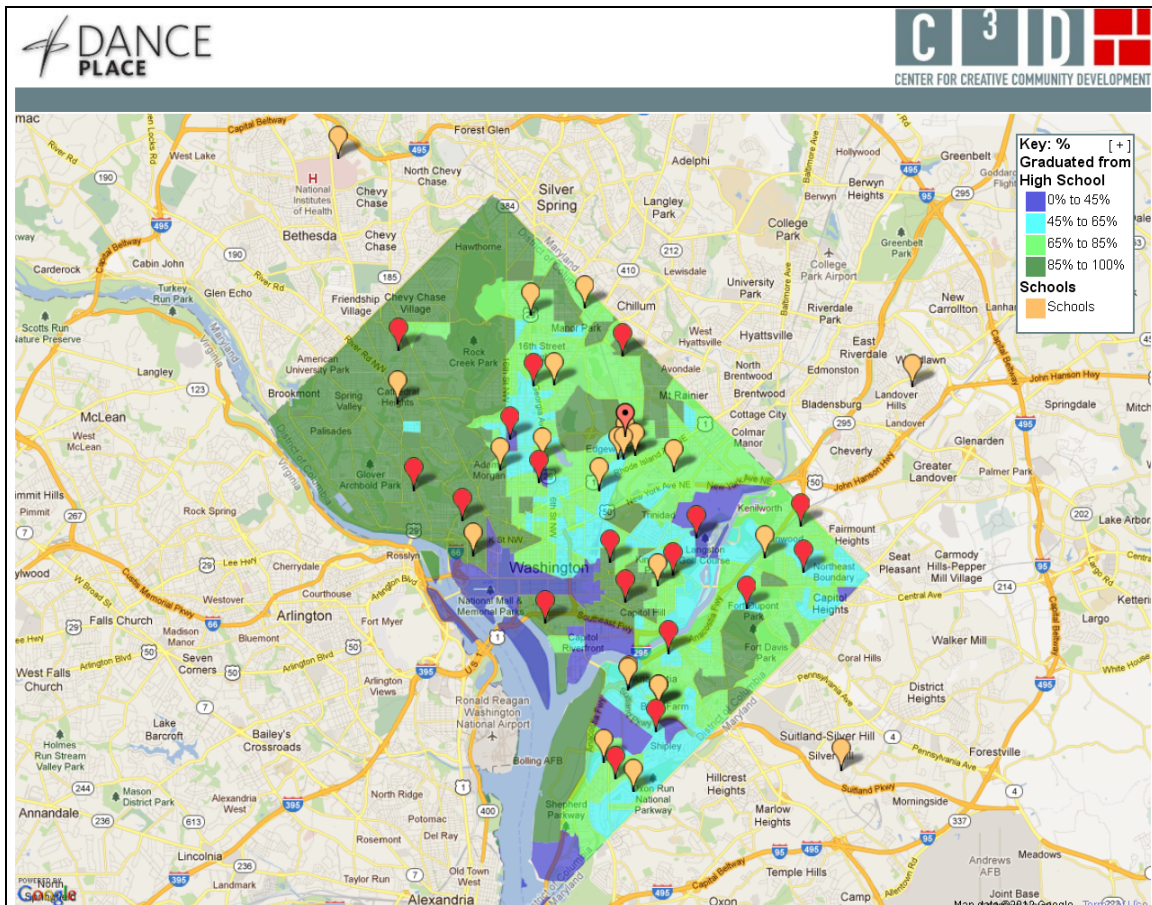
Figure 4: Middle Schools in Washington DC

At this point it might be of interest to turn the markers for the schools in Dance Place's outreach program back on. This is done by unchecking the "Hide Schools" box directly above the Geocode tab.[8] The resulting map is shown in Figure 5.

The map presented in Figure 5 would allow Dance Place to identify areas of the District that have more residents with lower educational attainment and evaluate if its current school outreach program reaches all of those areas. Dance Place could identify two or three neighborhoods where expansion of their program might be beneficial, along with the middle schools closest to these neighborhoods. The map in Figure 4 could be included in a section on identifying need, and the map in Figure 5 could be used in justifying where to expand the program geographically.

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[8] In some instances you may need to check "Hide Schools" and then uncheck it.

Figure 5: Washington DC Middle Schools and Dance Place Outreach Schools

Unlike the address maps created by us as part of Dance Place's online map tool, the address markers created using the Geocoder will not save permanently when the map is closed. You will want to save a copy of the addresses as an Excel spreadsheet or other file so that you may use them again in the Geocoder. You will also want to capture images of the map when it is made, so that you have copies for inclusion in reports. We discuss next how to do this.

How to prepare a map for inclusion in a report

Lastly, we describe how to prepare a map created with the interactive map tool for inclusion in a report[9]. We will discuss the map of outreach schools and middle schools in Washington DC in Figure 5 above. We have already provided the step by step instructions for creating that map.

Once the map is created, you will see a minus sign in brackets [-] in the corner of the right hand window of the computer screen. Click on this [-]. The window collapses such that the map key is now inside the map itself. It is possible to position both the map and the key for the best display. The F11 function key will expand the map so that it fills the screen, hiding your Internet toolbars.

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[9] These instructions are for a PC.

On your keyboard press the Control key (Ctrl) and Print Screen key (Prt Scr) simultaneously. This command will capture a copy of your screen as you see it. Now press F11 again to have access to your toolbar and Word document. Paste the image you copied into the document. You can adjust the size of the map by grabbing a corner of the image with your mouse and pulling or pushing diagonally on the corner.

Finally, right click on the map image and choose 'Borders and Shading'. Choose 'Box' and Word will draw a box border around the figure in your document. This is how Figure 5 above was formatted.[10] When you have completed these steps, return to the online interactive map. Click on the [+] in the key. The screen will return to its default state and you will have all the options of the navigation buttons at the top.

Summary

The information and examples provided here demonstrate how to use the interactive map tool created for Dance Place. The map tool is meant to be an additional resource for Dance Place to make the case, easily and effectively, for the impact of its school outreach program in Washington DC. The map tool is free, publicly available, and interactive.

With the discussion here to guide you, you can go to Dance Place's interactive map tool on our web site at http://web.williams.edu/Economics/ArtsEcon/DancePlace.html and explore Census variables in relationship to Dance Place's outreach programming. You can create dozens of maps and prepare relevant ones for inclusion in reports. The interactive map tool will be available to Dance Place into the future, and it will be possible for addresses related to new initiatives to be mapped.

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[10] There are differences not only between PC programs and programs for Mac, but also differences in different versions of Word and differences that may occur depending on the Internet browser you use. The instructions here are meant to give you a general idea of how to format the completed map. You may have to do an Internet search for equivalent actions depending on the configuration of programs on your machine.

Appendix A
Addresses of Middle Schools in Washington DC

Sample data to use in Geocoder at
http://web.williams.edu/Economics/ArtsEcon/mappages/DancePl/DPCountyMap/DPCountyMap.htm

School	Address	City	Zip
Backus Middle School	5171 South Dakota Ave NE	Washington DC	20017
Browne Junior High School	850 26th St NE	Washington DC	20002
Deal Junior High School	3815 Fort Drive NW	Washington DC	20016
Eliot Junior High School	1830 Constitution Avenue NE	Washington DC	20002
Francis Junior High School	2425 N Street NW	Washington DC	20037
Shaw Middle School @ Garnet-Patterson	2001 10th Street NW	Washington DC	20001
Hardy Middle School	1819 35th St NW	Washington DC	20007
Hart Middle School	601 Mississippi Ave SE	Washington DC	20032
Hine Junior High School	335 8th Street SE	Washington DC	20003
Jefferson Junior High School	801 7th Street SW	Washington DC	20024
Johnson Junior High School	1400 Bruce Place SE	Washington DC	20020
Kelly Miller Middle School	301 49th Street NE	Washington DC	20019
Kramer Middle School	1700 Q Street SE	Washington DC	20020
Lincoln Middle School	3101 16th Street NW	Washington DC	20010
Macfarland Middle School	4400 Iowa Avenue NW	Washington DC	20011
Ronald H Brown Middle School	4800 Meade St NE	Washington DC	20019
Sousa Middle School	3650 Ely Place SE	Washington DC	20019
Stuart Hobson Middle School	410 E Street NE	Washington DC	20002