Municipal Assistance Program
Interactive Mapping Handbook

New Jersey Meadowlands Commission

Meadowlands Environmental Research Institute

July 2006

Borough of North Arlington

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INTRODUCTION

Under the Municipal Assistance Program (MAP), the New Jersey Meadowlands Commission (NJMC) and the Meadowlands Environmental Research Institute (MERI), through their Geographic Information Systems (GIS) Department have developed this manual to assist users with different knowledge of GIS to use this technology. GIS is a technology that integrates spatial data that enables users to analyze, map and query geographic features.

MERI-GIS has been developing dataset layers for municipalities participating in the MAP program. These layers make up critical information that District municipalities can utilize to assist in decision-making.

NJMC Municipal Mapping is a web application, which allows users to view town information using an Internet browser. It has an interface that is similar to GIS applications such as ArcView. The Internet mapping application provides map views, windows for viewing records, and the capability to produce printouts of maps.

The purpose of this manual is to allow the user to become familiar with the two main tools of NJMC Municipal Mapping:

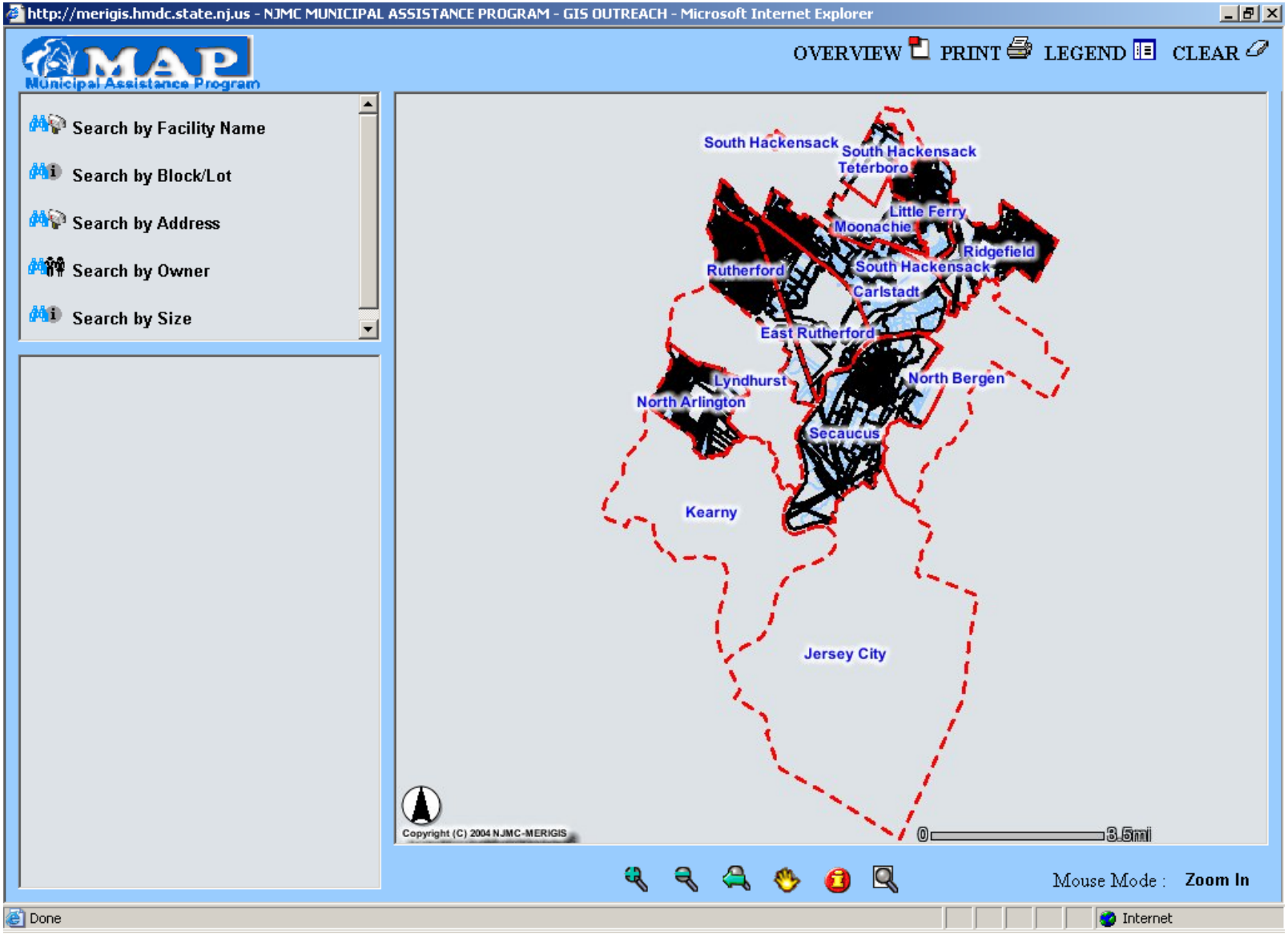
I. Municipal Parcel Map Application:

1. Launching the ***Municipal Parcel Map Application***
2. User Interface Components
3. Searching by Facility Name
4. Searching by Block and Lot
5. Searching by Address
6. Searching by Owner
7. Searching by Size (with Land Use)
8. Printing a Map

II. The Municipal Maps Application

1. Launching the ***Municipal Maps Application***
2 User Interface Components
3 Finding Locations/ Address
4 Using the Query Tool
5 Using the Buffer Tool
6 Printing a Map
7 Help Information
8 Challenge Exercises

SECTION I
Municipal Parcel Map Application



1.0 Launching the Municipal Parcel Map Application

The Meadowlands Environmental Research Institute Geographic Information Systems (MERI-GIS) Web Page can be accessed through the following URL **http://meri.njmeadowlands.gov/gis/index.html**

The NJMC Municipal Maps provide individual Meadowlands municipalities the ability to use Internet browsers to query and analyze geographic layers about their town. The ability to layer GIS data on the fly is a relatively new technology. It provides user access to GIS data using the Internet.

The NJMC Municipal GIS Maps consist of two applications: **Municipal Maps Application** & **Municipal Parcel Map Application**

To launch the mapping services available for North Arlington, click on the 'Municipal Maps' tab and click on 'Municipal Parcel Map'.

Figure 1.1 Meri-GIS Web Page

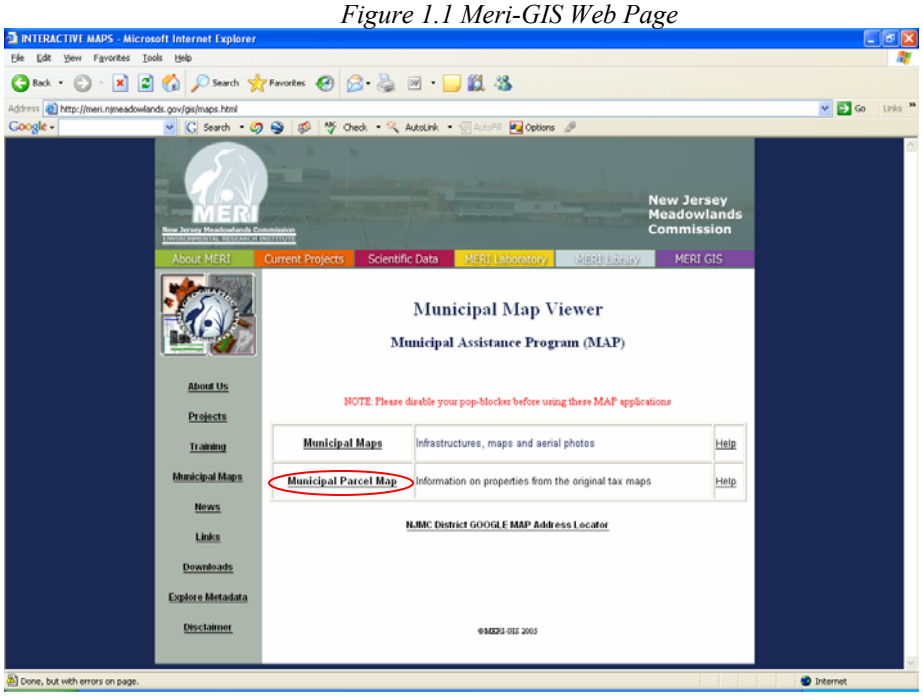


Figure 1.2 Municipal Parcel Map

After clicking on the Municipal Parcel Map application, the following window will pop up. The window that appears (illustrated below) is the *Interface Window*. This is the default window for the Municipal Parcel Map application. This application contains tools and helpful search buttons. When you are prompted for a password, enter “meri” as the user name and “meri” as the password.

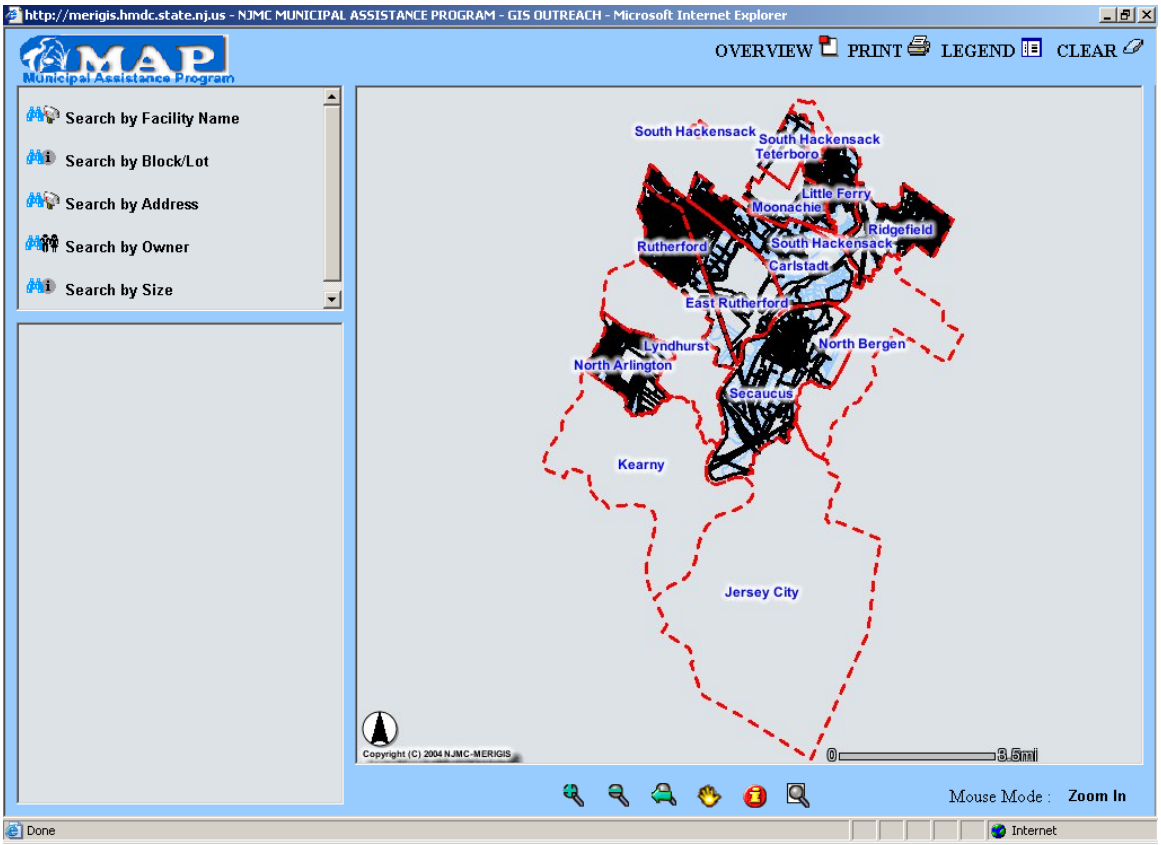


Figure1.3 Map View Frame

2.0 User Interface Components for Municipal Parcel Map Application

2.1 Map Tools

The first set of these tools is located on the bottom part of the application. They include the following tools/buttons:

Zoom-In Tool – Allows you to zoom in on the Map display. By using the left mouse button, and clicking anywhere on the Map, draw a box around the area that you want to zoom-in on. Notice the map will change.

Zoom-Out Tool – Allows you to zoom-out in the Map display. Similar to the zoom-in tool, this button allows you to zoom-out at a specific area or define a box for your zoom-out scale.

Previous Extent Tool – Allows you to zoom to the previous extent of the Map display.

Identify Tool – Allows you to identify the attributes of the Parcel layer. Attributes include Block Number, Lot Number, Acres, Land Use, etc.

Reset Button – Brings your map to full extent

Pan Button – Allows the map to be panned by clicking and dragging a point on the map.

The second set of tools is located on the top left side of the window. These components allow the user to query specific attributes of the Map. Queries can range from block and lot to owner information. If they are not displayed already on your map, click on the Search Menu button (binoculars icon). Refer to sections 1.0 to 7.0. The last set of tools is located on the top right side of the window and includes the following:

The print button - is used to print the current map frame along with the legend. This shows the current layout that the Interactive Map Application creates.

Clear Button – Clears all selected features

Legend Button – Toggles the map legend on or off.

Overview button – Toggles overview map on or off.

3.0 Search by Facility Name

The first search option allows the user to input the name of a property, and a list of all properties with that name is returned. The user can also input a part of the facility name and get all properties with that word in the name.

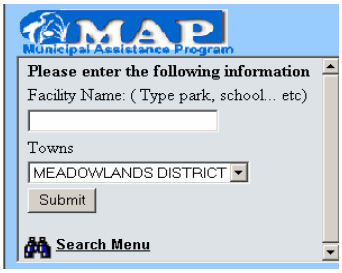


Figure 3.1 The Search by Facility Name dialog box.

4.0 Search a property by Block and Lot

This tool allows you to query for a specific block and lot.

To query for a specific block and lot, click on the following

button. The following dialog box will appear. Click the submit button to execute the search.

Please enter the following information

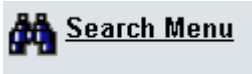
Block Number

Lot Number

Towns MEADOWLANDS DISTRICT

Submit

Figure 4.1 Block and Lot Search Dialog Box

Try other block and lots to see how this tool works. To go back to the list of available search queries, click on the 

button.

5.0 Search a property by Address

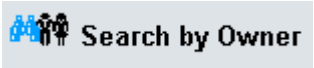
The third search menu button that is available is the

button. This button allows the user to type in a specific address. **NOTE**: Addresses are only searchable if they meet an exact match contained in the parcel data, which is taken from the State's MOD4 parcel database. The correct input of the address is critical.

5.1 Exercise – Using the Search by Address tool

In this exercise, we will search for a specific address contained in the parcel data. The Town only has an address for a property, and needs to identify the block and lot for a general property inquiry. Let's type "212 Ridge Rd." Does this query result in a matching parcel? What is the block and lot for this parcel? We can locate other addresses if we have a specific address that we want to search. In addition, the application offers flexibility in searching address names. For example, if you want to search "Ridge", it will return all instances of said address name.

6.0 Search by Owner

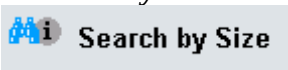
The fourth search query tool is the 

button. Let's say we do not know either the block and lot or address, but know the owner of the property. We can do this with the Search by Owner button. Let's type "**North Arlington Board of Education"**. Notice that our query results in 19 matching records.

6.1 Exercise – Identifying Parcel Attributes by using the Search by Owner tool button

Similar to the previous exercise, we can locate owners. Let us use the ***Search by Owner*** button and perform the following query: How many parcels are owned by 'BOROUGH OF NORTH ARLINGTON'? Does typing the owner name in capital or lower case make a difference? Note: Remember the owner query must match exactly what is contained in the parcel database. In addition, remember this application will return matching records not only for North Arlington, but also for other towns in the database. Typing in BOROUGH OF NORTH ARLINGTON may also give results outside of North Arlington

7.0 Search by Size (LandUse)

The last of the search buttons available is the ***Search by Size*** tool. This tool, which is located just below the Search by Owner, looks like the following: 

. This tool provides an acre range for the land use that you are querying.

7.1 Exercise – Land Use Search

In the Search Menu box, use the ***Search by Size*** button to identify all Industrial lands (in Land Use) between 1 to 15 acres. How many properties are highlighted in your search? Notice your query is highlighted in the Map Frame. Who owns parcel ID 19452? What is the block and lot? Go back to the rest of the records and look at the first record on the list (Parcel ID # 19452)? Click on #19452 and view the information associated with this parcel.

8.0 Printing a Map

Printing a map in either interactive mapping application is very simple. Simply, click on the button and the following dialog box will appear:

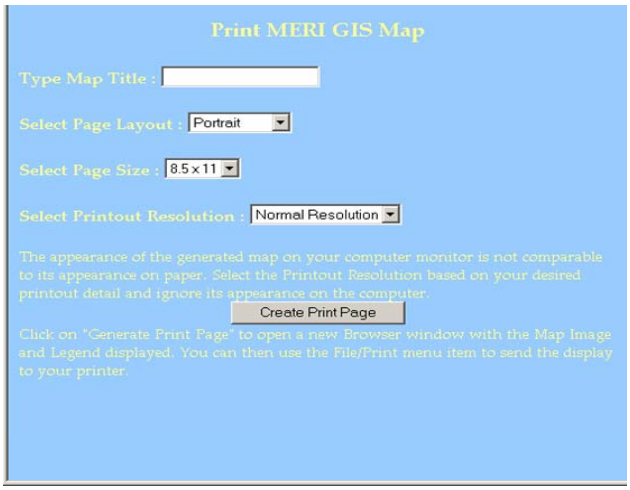


Figure 8.1

You may choose any title for your map in the "Type Map Title" field. Next, you have the option of selecting a page layout. The page layout of your map can have two (2) different choices: 'portrait' or 'landscape'. The difference is the way the map is viewed once printed. Select 'portrait' to set the map along the vertical sides of the page. Select 'landscape' to set the map along the horizontal sides of the page.

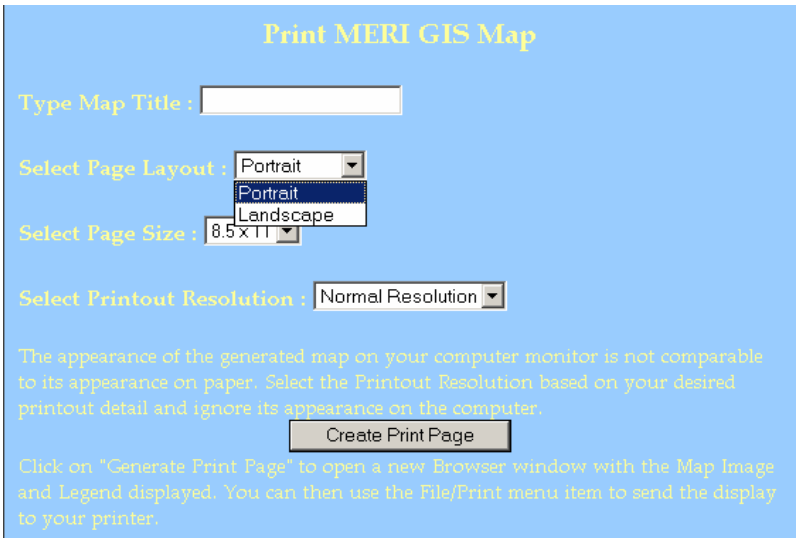


Figure 8.2

Depending on how large you want the map to appear, you may change the ‘page size’ to the desired measurements given in the “select page size” field:

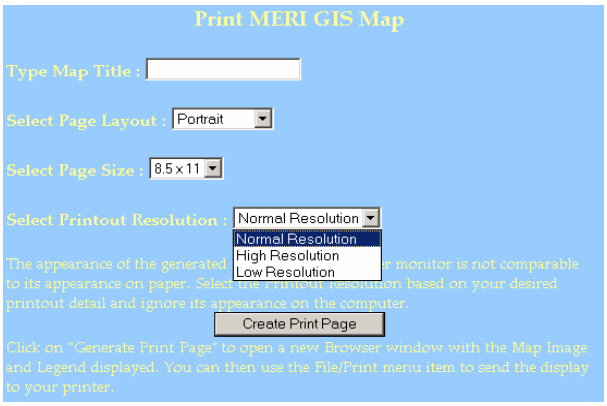


Figure 8.3

The resolution of your printout can also be adjusted depending on how clear and detailed you want your map to be. You may choose Normal, Low, or High Resolution in the “Select Printout Resolution” field. If you have many layers, it is recommended that you select a low resolution.

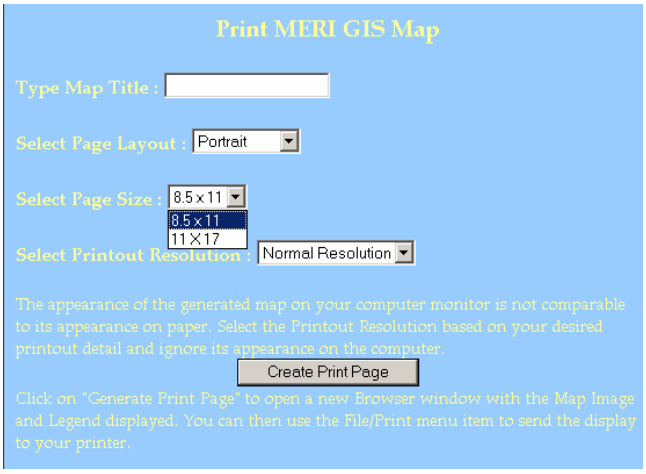


Figure 8.4

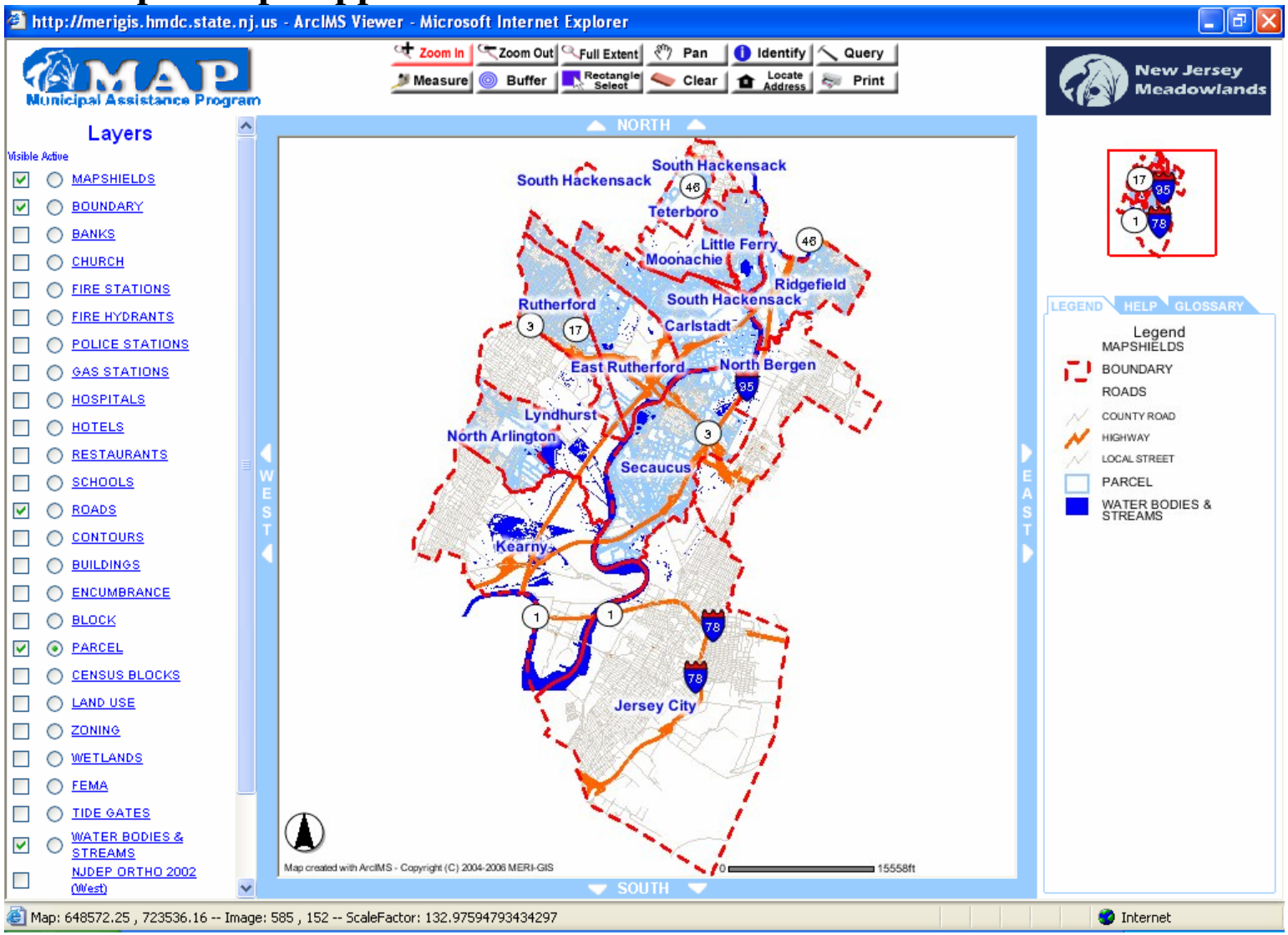
Click on Create Print Page

button. This simplified form of printing is very generic. The printing in this application will be affected based upon the settings you have chosen before. You cannot modify the map layout any further other than those settings. Whatever you see on the Map View Frame is what will display and eventually print. The map will look like the following illustration:

North Arlington

Figure 8.5

SECTION II
Municipal Maps Application



1.0 Launching the Municipal Maps Application

To launch the ***Municipal Maps Application***, click on the text: 'Municipal Maps' section.

Municipal Maps	Infrastructures, maps and aerial photos	Help
Municipal Parcel Map	Information on properties from the original tax maps	Help

2.0 User Interface Components for the MUNICIPAL MAPS APPLICATION

Similar to the Municipal Parcel Map Application, the window interface in this application provides similar map tools. The main difference in this application is the amount of GIS data that can be layered and queried. For example, in this application, a user can layer parcels, land use, contours, fire hydrant locations, and schools, just to name a few all in one view. The following illustration displays the *Map View Frame* (Figure 2.1).

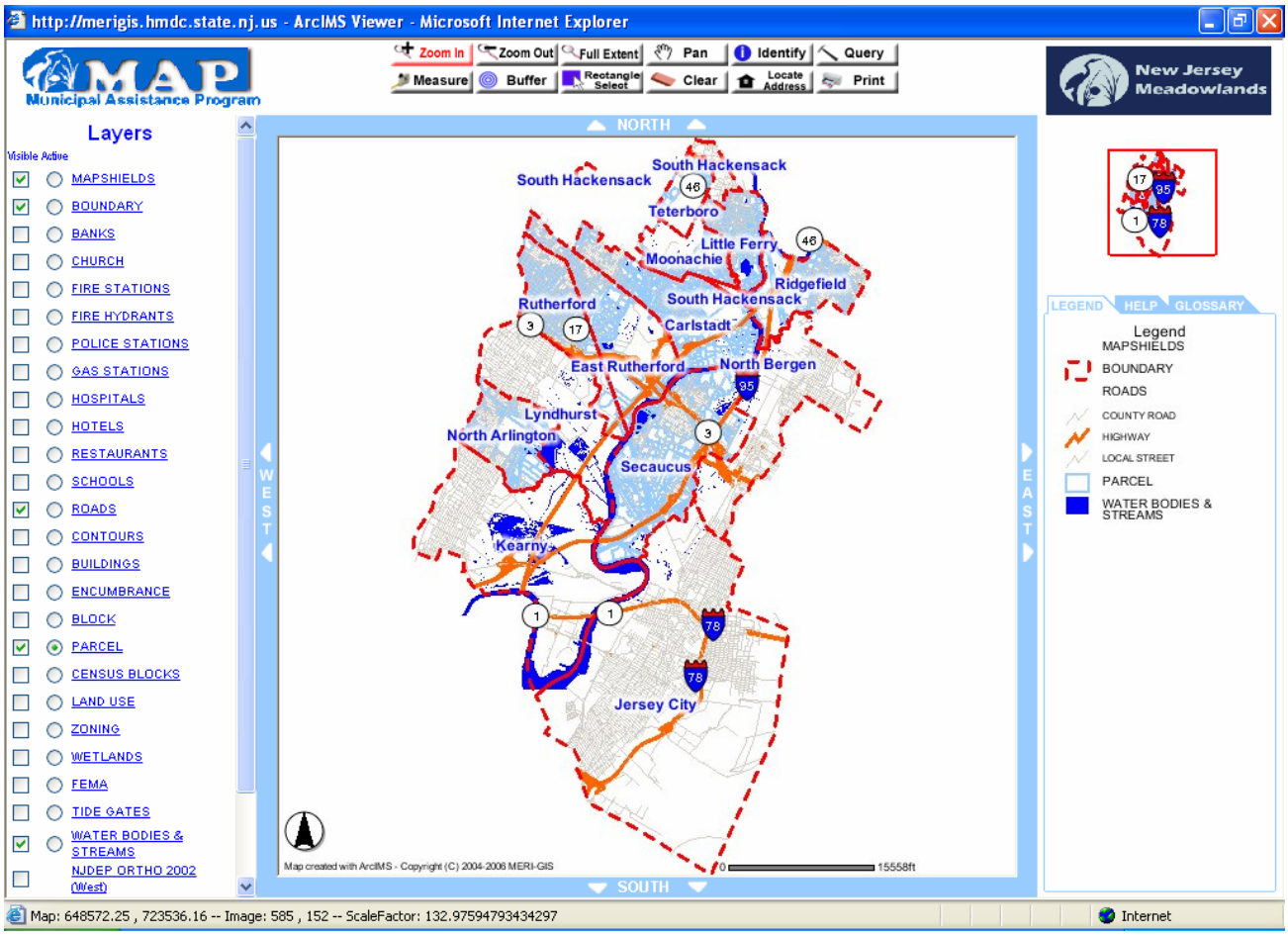


Figure 2.1 Map View Frame for the Municipal Maps Application

The map view frame is where the map is displayed. In this application, the pan and zoom tools can be used to navigate around the map view frame. These are located on the border of the map view frame window, as well as in the main map tools located above the map view frame. For example, the zoom-in tool allows you to zoom-in for a closer look at a specific area. Other tools include the identify button, query button, and the pan button for easy navigation around the map. The following section explains these tools and more.

2.1 Toolbars

Figure 2.2. Several Toolbars are available in the Municipal Maps Application

Only one tool can be active at one time. The ***active*** tool will be highlighted in red.

The **Zoom-In** and **Zoom-Out** buttons are used to zoom in/out of the current map frame. You can either click on a single point to zoom by a default factor or draw a rectangle/box to zoom in and out.

The **full extent** button is used to return to the full extent of the map frame or the visible data.

The **pan** button is used to pan or move by dragging on the map in the desired direction

The **identify/select** button is used to view attribute data about the feature which the user clicks on. Data will be shown for only the currently active layer. In addition, the feature is considered "selected" for purposes of buffering, and will appear in yellow. The user can also draw a box, similar to when zooming, to select more than one feature.

The **query** option allows the user to retrieve specific data parameters and search fields by the use of SQL queries. Clicking the Query tool will initiate a new window where the user will choose the layer they wish to query from a list of currently visible layers. After making the choice, the user can create a SQL query from custom menus.

The **measure** tool is used to measure distance on the map. Click once to set the point of origin and then continue clicking to mark endpoints. Use the clear button to clear the measured lines. A dialogue box appears on the top left showing the distance measured.

The **buffer** tool is used to create a circular area of a defined radius around the selected feature of a map layer that was a result of a query or selection.

The **clear** button is used to clear highlighted/ selected features in the map frame. (This is mainly used after a query or selections have been performed, and the user wants to clear his/her selection or query).

The **locate address** button is similar to the 'Query' button, but with a preset format where you just enter a street address.

The **print** button is used to print the current map frame along with the legend. This is a preset Layout that the Interactive Map Application creates.

Figure 2.3 Description of toolbars available in the Municipal Maps Application

2.2 List of Layers

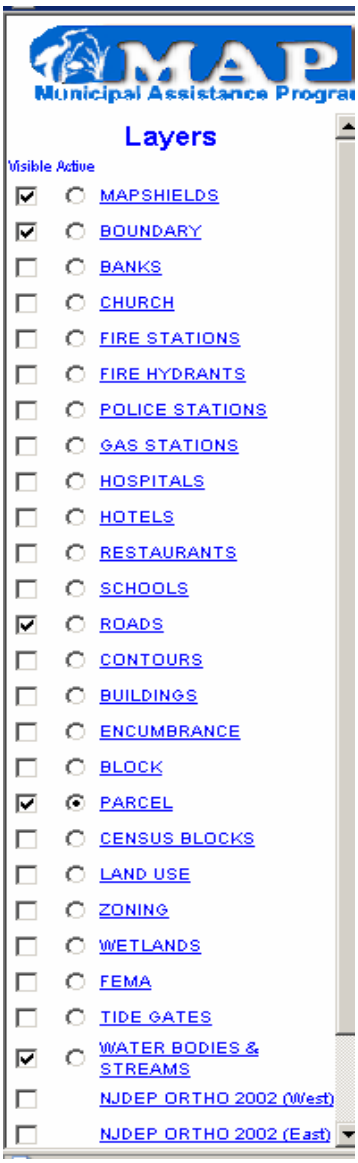


Figure 2.4 Data Layers

The list of data layers is where all available information layers are displayed. The user can choose which layers to make visible by clicking on the check box beside the layer name.

Queries can only be performed on the active layer. Clicking in the circular radio button beside a layer will set that layer as active. Only one layer may be active at a time. Clicking on the layer name itself will open a page containing the metadata for that specific data layer.

Layers include Fire Stations, Hotels, Schools, Churches, Restaurants, Contours, Roads, Parcels, Land Use, Zoning and Wetlands.

2.3 Metadata

There is an abundant amount of data layers to choose from. With all of this data at your disposal it may be difficult to tell what each layers contains by just looking at the layer name. If you wanted to see what information is stored in each layer, you can click on a layer name (blue underlined text) to open its **metadata** (an explanation of the information in each layer).

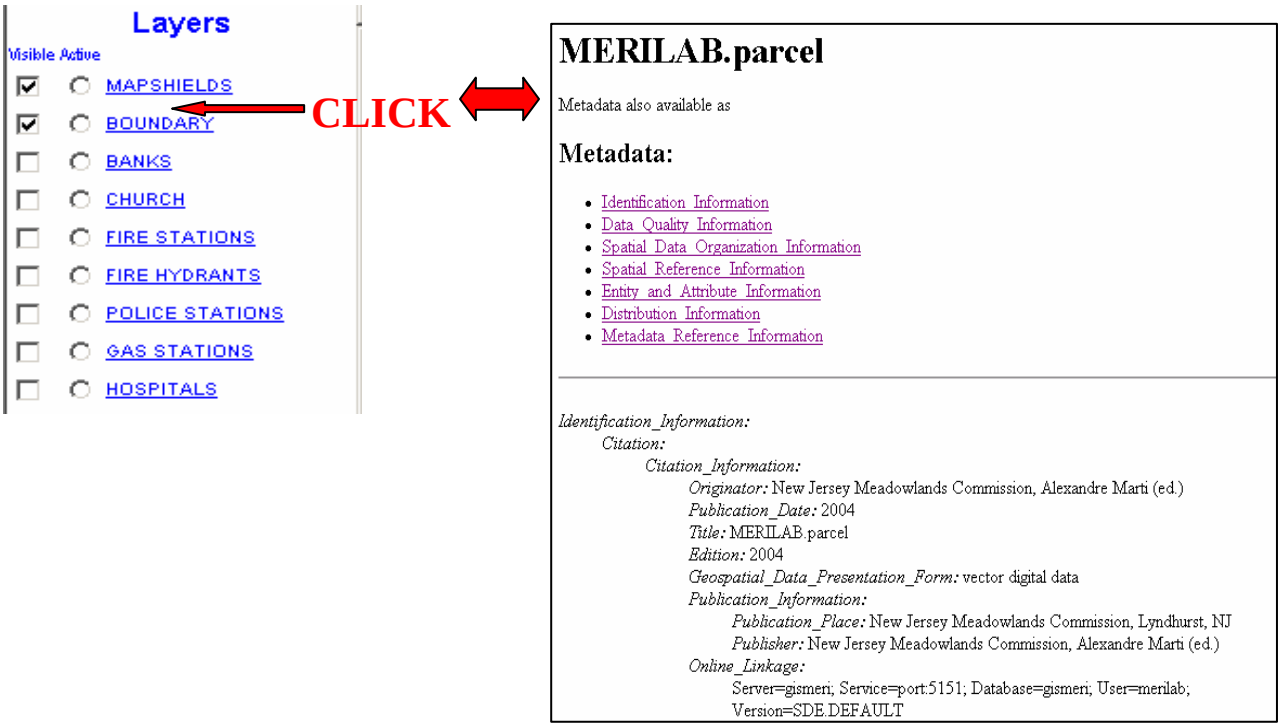


Figure 2.5 Metadata Example

Metadata is defined as 'data about the data'. Metadata is often referred to a detailed table of contents of the data layer. Information contained in typical metadata sets includes, but are not limited to the following:

- Who created the data, who maintains the data and how they can be contacted
- How the data was created and in what format
- How the data is maintained
- A description of each data field
- Data distribution disclaimers

Click on the metadata for the **zoning** data layer. Who is the originator (creator) of this data set? What is the purpose of this data set? What is the definition of the **Environmental Conservation** zone? (Hint: look in the 'Entity and Attribute Information' section)

2.4 Legend

The **Legend Tab**

can be found on the right side of the map frame.

Figure 2.6 Example of Zoning Legend

2.4.1 Exercise – Attribute Table

Using the Identify/Select

tool, click on a parcel. What are some of the attribute fields in the Parcel layer? Use this tool to familiarize yourself with the Layer information.

3.0 FINDING LOCATIONS and ADDRESSES

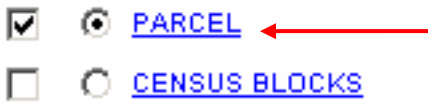
There are several ways to search for an address in the Municipal Maps application. If you wanted to query an address using the

tool, your address input variable has limited flexibility. The address has to match exactly what is stored in the parcel database. For instance, the following address will have to be written exactly as **'212 RIDGE RD',** not as '**212 RIDGE',** or **'212 RIDGE ROAD'**.

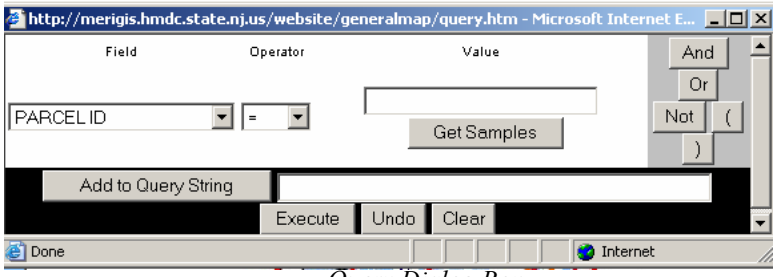
The following exercises will guide you through the various ways to search for an address. The first exercise: 1) Query button function, 2) Locate Address tool and 3) Manually find an address.

3.1 Exercise – Search by Property Location – Query Tool

First, ensure that the **Parcel** data layer is active. Do this by clicking in the radio button next to "parcel:

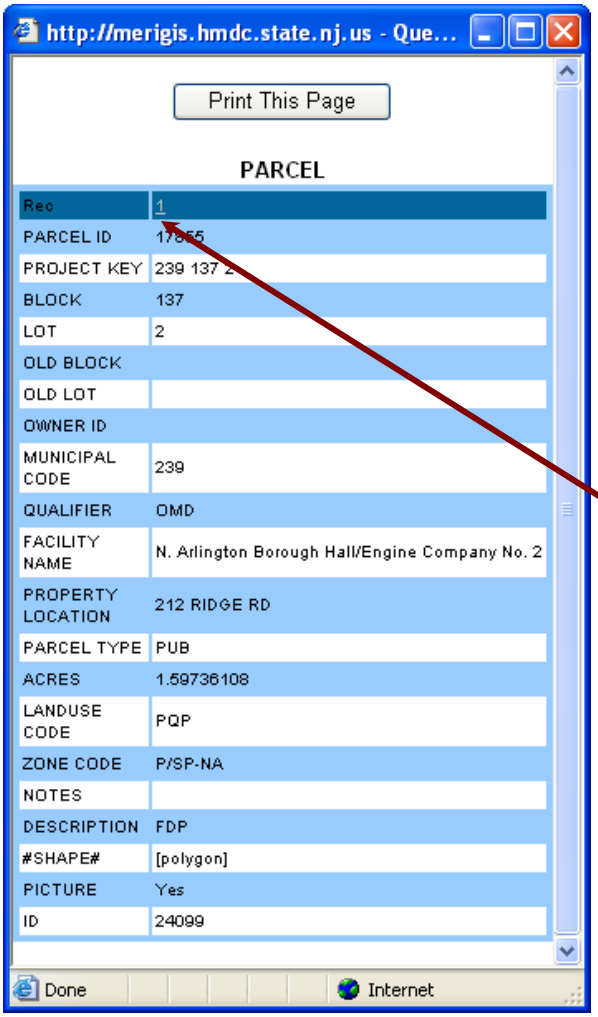


Next, click on the Query tool to activate the query function. The following box will appear:



Query Dialog Box

In the Query box dialog, use the pull-down menu to change the field to 'Property Location'. In the 'value' section, type in "212 RIDGE RD". Click on the '**Add to Query String**' button to transfer the string text and click on '**Execute**' to perform the query.



The results will appear in the '**Query/Selection Results**' frame. 1 record is listed in this frame. Click on the record number to view the results in the map frame. This will present a zoomed-in view of the property. Note that all properties which met the search criteria are highlighted in yellow, while the property which was actually selected is highlighted in orange.

Click Here

Figure 3.1.3 Illustration of the Map Frame Query Results

Properties which matched search criteria **Selected Properties**

3.2 Exercise – Search by Property Location - Locate Address tool

Using the **Locate Address** button gives us the flexibility to search without exact parameters. This tool also does not require entries in capital letters. Press the Clear button to clear all selections. If necessary, click on the 'zoom to full extent' button Full Extent to zoom back to the full view. Click on the **Locate Address** Locate Address button to initiate a new dialog box. Type in the following address in each way specified below. Click on 'Locate' or the enter button to initiate each search. After each entry result, click on 'Locate Another Address' to clear your selection. Did each address result in a logical match?

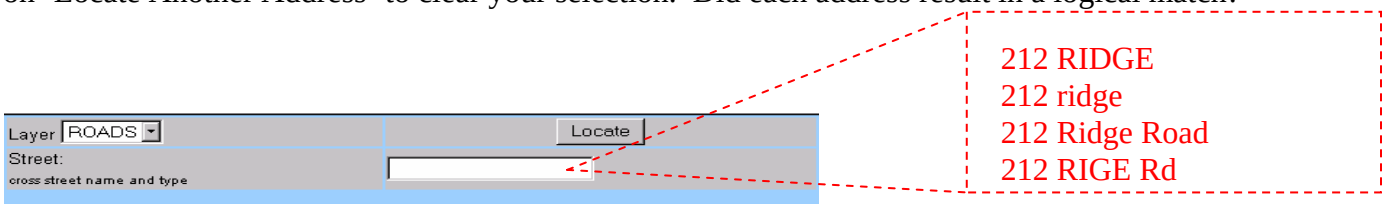


Figure 3.2.1 Examples of Query Inputs

Try some other addresses to get a feel for the flexibility of this search engine.

3.3 Exercise – Search by Property Location - Manual

If you haven't done so already, press the clear

button to clear all selected properties from the previous exercise. Also, click on the 'full extent' button

to bring the map back to its full view.

In the Data Layer section, check the following:

- Boundary
- Roads
- Block
- Parcels
- NJDEP Ortho 2002 (District)
- NJDEP Ortho 2002 (West)

Using the Zoom-In

command, place a zoom rectangle around the 'North Arlington' municipal label text. This will increase your scale to show a closer view of the area outlined in your rectangle. Your zoomed-in scale should look similar to the following:

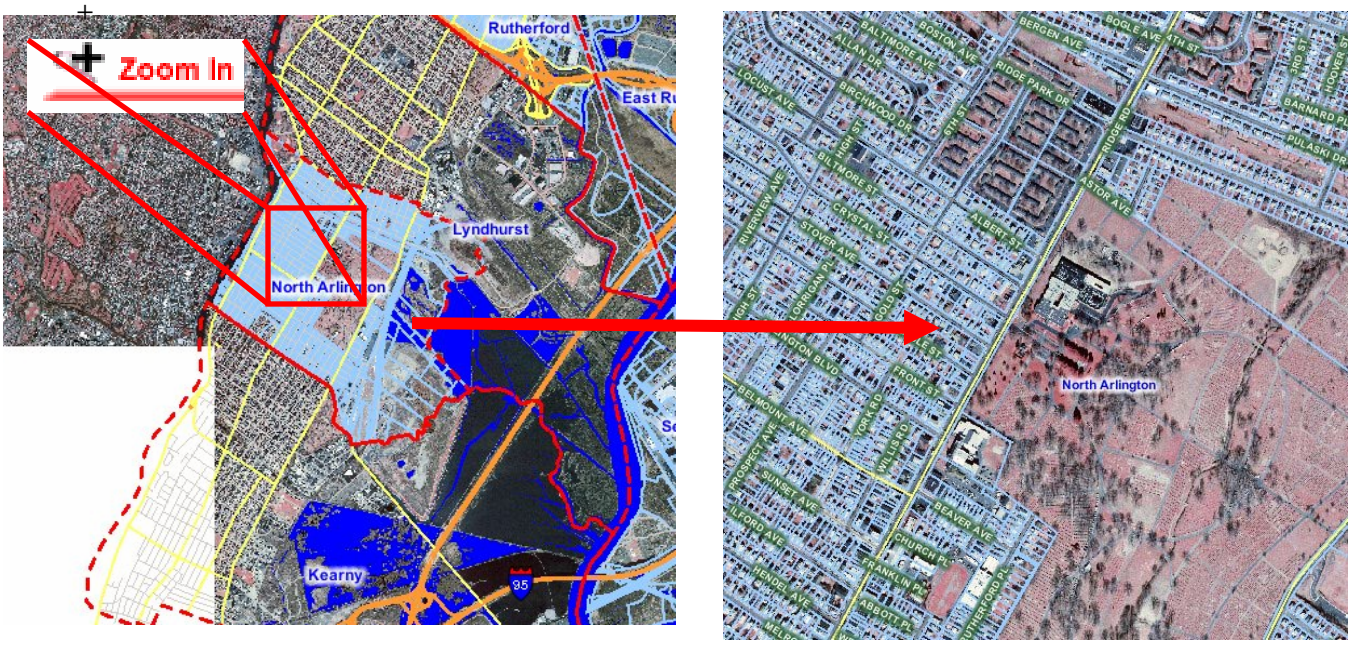
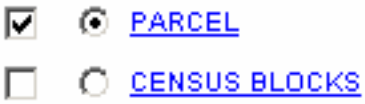


Figure 3.3.1 – Zoom In Frame Results

Use the Zoom-In command again until you can see road and block labels. Different types of information are shown depending on the zoom level. Once you have zoomed in to a reasonable scale, set 'parcel' as the active layer by clicking in the radio button next to 'parcel' in the data layers list.



For purposes of this exercise, ensure that 'Parcel' is selected. Also for purposes of this exercise, the property on the corner of Ridge Rd. and Beaver Ave. will be chosen. Use the

button and click on the parcel (or draw, using the mouse, a small rectangle that only touches the parcel you wish to select). Doing so will result in the selected property being highlighted in yellow and also the appearance of an attribute box.

Click on the record number at the top that, in turn, changes the highlight color to orange and zooms in to a closer scale:

Figure 3.3.3 – Parcel Record Selection

4.0 USING THE IDENTIFY/SELECT TOOL

A quick way of obtaining attribute information would be to utilize the identify/select tool. The identify/select tool organizes your information in a printable format. For example, with Identify/Select selected, click on the parcel from the previous exercise. The following attribute box should appear:

PARCEL

Rec	1
PARCEL ID	17911
PROJECT KEY	239 137 1
BLOCK	137
LOT	1
OLD BLOCK	
OLD LOT	
OWNER ID	
MUNICIPAL CODE	239
QUALIFIER	OMD
FACILITY NAME	N. Arlington Public Library
PROPERTY LOCATION	208 RIDGE ROAD
PARCEL TYPE	PUB
ACRES	0.24950268
LANDUSE CODE	PQP
ZONE CODE	P/SP-NA
NOTES	
DESCRIPTION	LIB
#SHAPE#	[polygon]
PICTURE	Yes
ID	4558

Figure 4.1 – Identify Results

Notice that the attribute information shown is that of the active data layer only. To see information for other layers, they must be active.

Change the currently active data layer to 'zoning' (and click the check box to make zoning visible). Notice how the attribute box now displays zoning information.

Also notice that, there is a print button. Click on this button when you need to print the information listed in the attribute box.

Each section in this attribute box contains 2 columns. The first column is the header and the second column is the resultant field value. Notice how the header column is in blue, underlined text. For web-savvy users, this is an indication of a 'hot link.' Clicking on this text will take you to another embedded web page that will give you details of the metadata on each data header.

5.0 USING THE MEASURING TOOL

When dealing with zoning, planning, engineering and construction items, the questions of 'How far' and 'How long' are often brought about. The *Municipal Maps* application contains tools that will enable you to quickly answer these questions. Continuing on from the previous exercise, leave the selected property as-is. Click on the measure

button that will result in new information fields that appear at the top of the map frame:

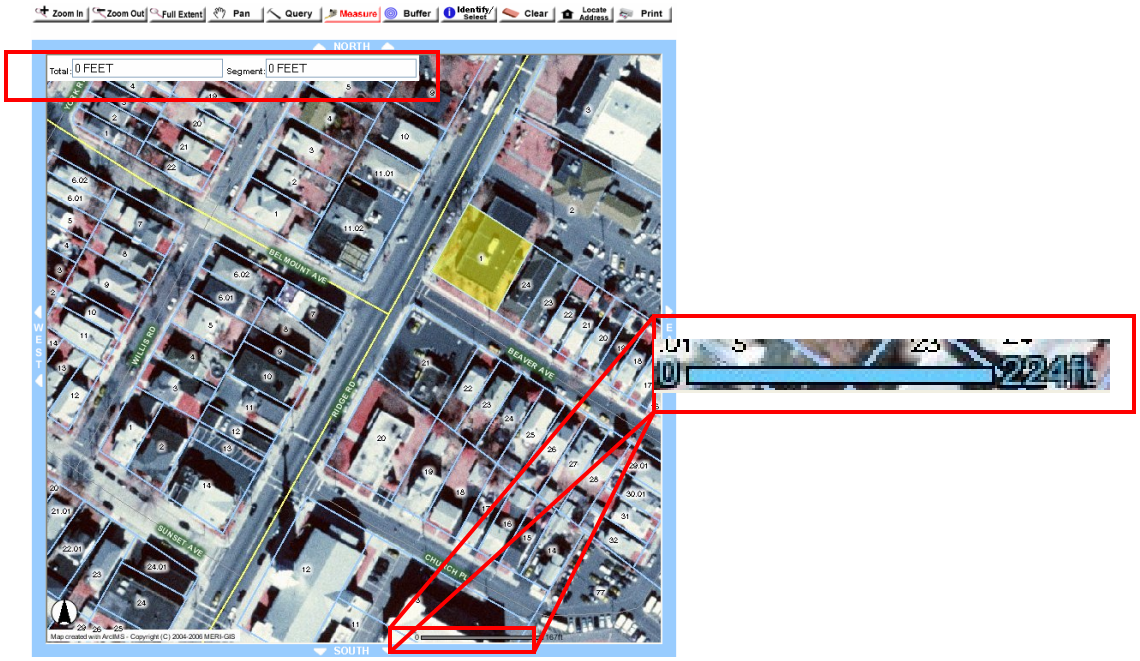


Figure 5.3 – Measurement calculator

Once you activate the measurement button, click on a point on the screen. Doing so will place a small blue circle where you clicked. As you move your cursor along the screen, notice how the 'Segment' information box measures how far you have moved from your blue circle point.

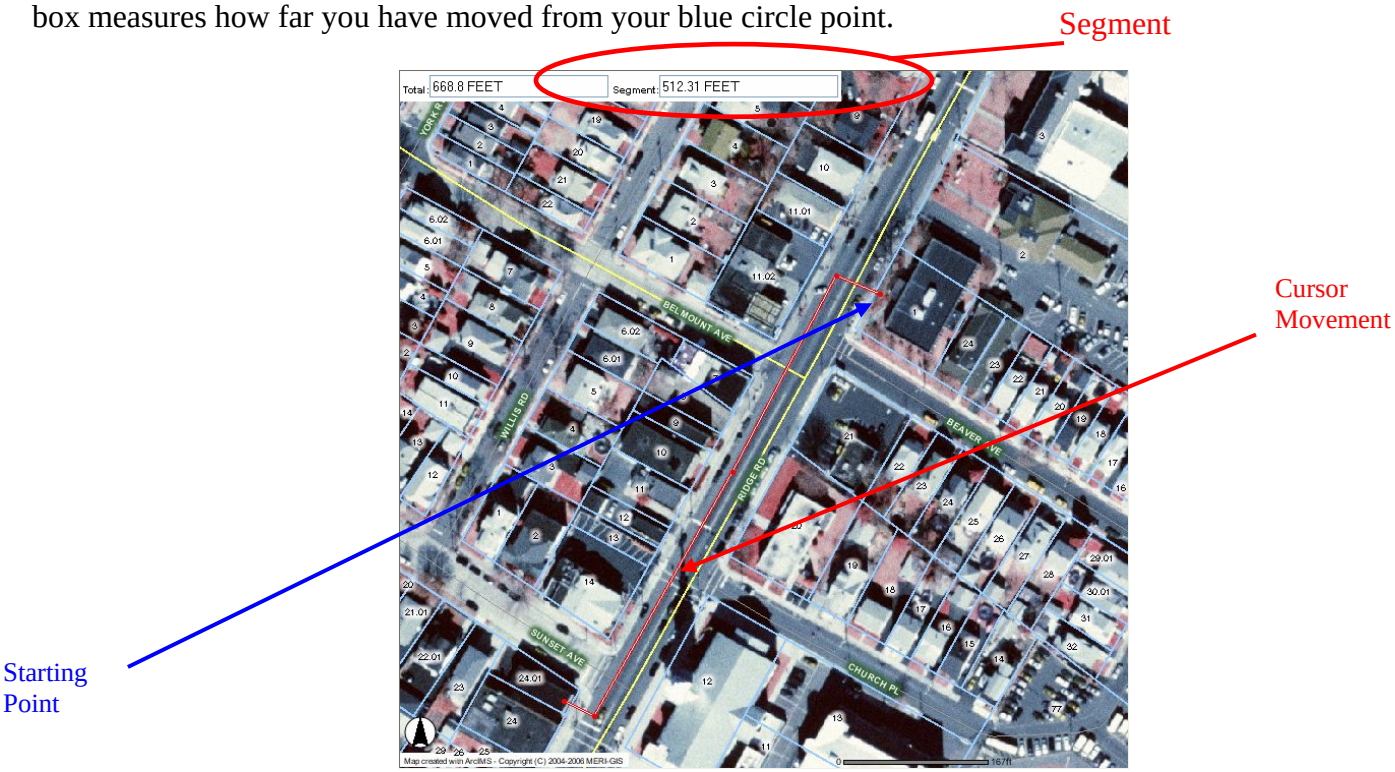


Figure 5.4 – Measurement Cursor Points

Click on another point on the screen and you will close this segment. The measurement will be logged in the 'Total' information box and the 'Segment' section will begin measuring again from the last clicked point.

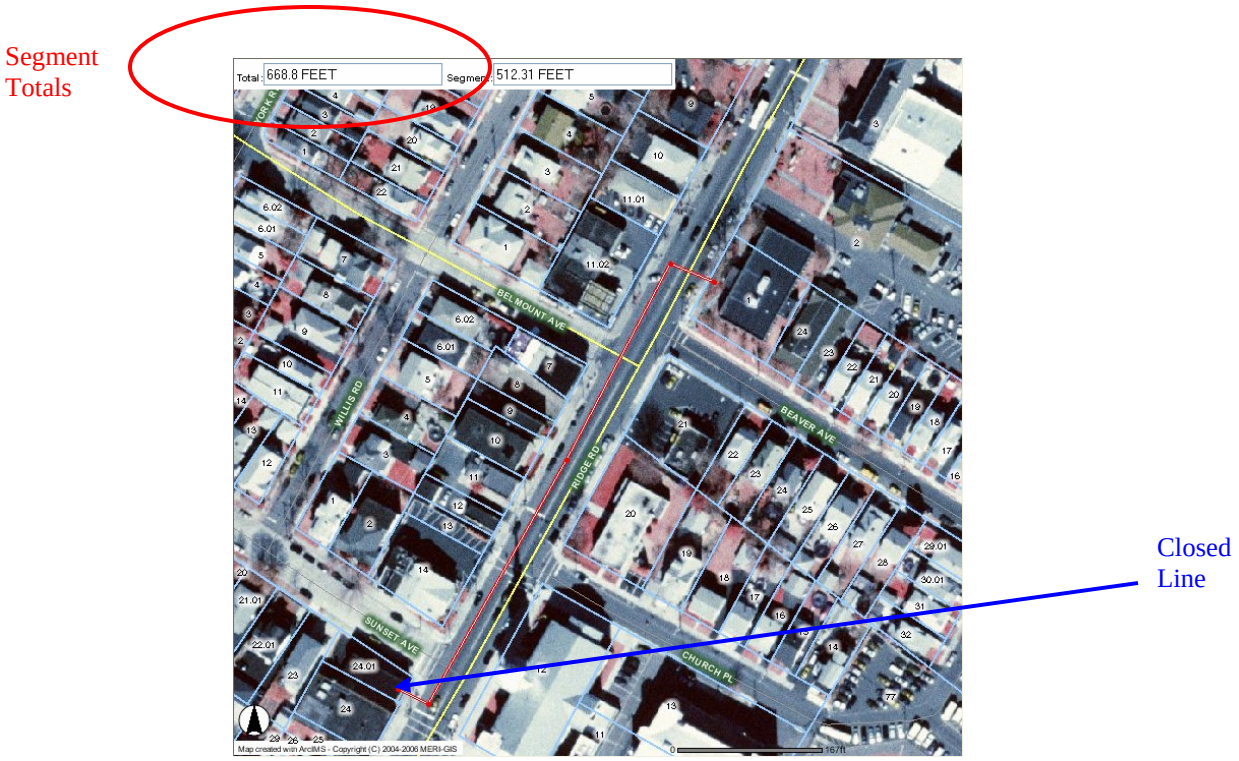


Figure 5.5 – Measurement Totals

6.0 USING THE BUFFER TOOL

This tool allows you to buffer a selected feature in the map, and an example of which can be to show an area 5 miles around a given property. What this tool is useful for is variance, zoning notification or even evacuation notification for adjacent properties that require property notices.

In the application, the

tool is available only for a selected feature. Remember, a feature is selected by using the Identify/Select button. By using the

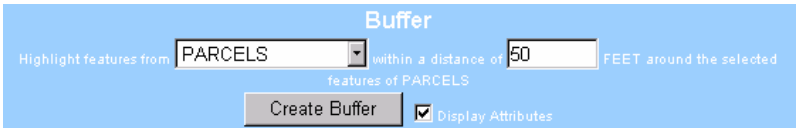
tool, the user can buffer a specified distance from a selected point. The following are the steps are taken to initiate the

tool:

- Ensure that all previous selections have been cleared. Use the

button to clear all selections.
- Select the parcel (or other feature) to create a buffer around. Make sure to set 'parcel' to the active layer. Then, use the rectangle select feature to select the parcel which you would like to create a buffer field around.
- Click on the

button to activate the dialog screen shown below. Use the pull-down menu to complete the query 'Highlight features from' and select 'Parcels.' Choose a distance of '50' and check the 'Display Attributes' box.



- Click on the ‘Create Buffer’ button and the map frame will display a calculated buffer around the perimeter on your selected property. Any property touching that buffer will be listed in a separate window frame and organized in a printable format.

PARCEL

Rec	1
PARCEL ID	17732
PROJECT KEY	239 137 3
BLOCK	137
LOT	3
OLD BLOCK	137
OLD LOT	3
OWNER ID	
MUNICIPAL CODE	239
QUALIFIER	OMD
FACILITY NAME	N. Arlington High School
PROPERTY LOCATION	RIDGE RD
PARCEL TYPE	PUB
ACRES	3.03817531
LANDUSE CODE	PQP
ZONE CODE	P/SP-NA
NOTES	
DESCRIPTION	SCH
#SHAPE#	[polygon]
PICTURE	Yes
ID	24118
Rec	2
PARCEL ID	17855

Figure 6.1 – Buffer Selection Results

6.1 Exercise – Buffer Parcel(s)

Now that we have seen the functions of the buffer tool, let’s try using this tool to buffer a selected parcel on our own.

- In the ***“within a distance of”*** box, type 50. In this exercise we will buffer a selected parcel within a distance of 50 feet.
- Click on the ***“Display Attributes”*** box to display the results. Try this with different distance values.
- Also, uncheck the ***“Display Attributes”*** box. What is the difference by not checking the box?
- Un-checking this box will allow for a faster query of the parcels. If your distance is higher, and you have this box checked on, the application will take much longer to process your request.

Additionally, let’s use the query

tool to select a parcel from our parcel data.

- A window will pop up. Choose parcels as your active layer. Click on continue and a query dialog box will appear.
- Under Field, select “ProjectKey”. The operator will be “=”. The Sample values will be “239 15 24”.
- Click on “Add to Query String” button. Notice the field will be filled in with “PROJECTKEY =239 15 24”.
- Then, click on “Execute” button. A window will pop up. Click on the number “1” next to “Rec”. This will zoom in to your query result.
- Now that you have 1 parcel selected, let’s create a 50-foot buffer around this selected parcel. First, close the Query selection/Selection results and then make the roads visible and active.

- Click on the Buffer tool. Under Highlight features from, check on “Roads” “within a distance of” 1000 feet.
- Check on the Display Attributes box. How many roads are within your buffer?

7.0 PRINTING A MAP

Printing a map in either interactive mapping application is very simple. Simply, click on the

button and the following dialog box will appear:

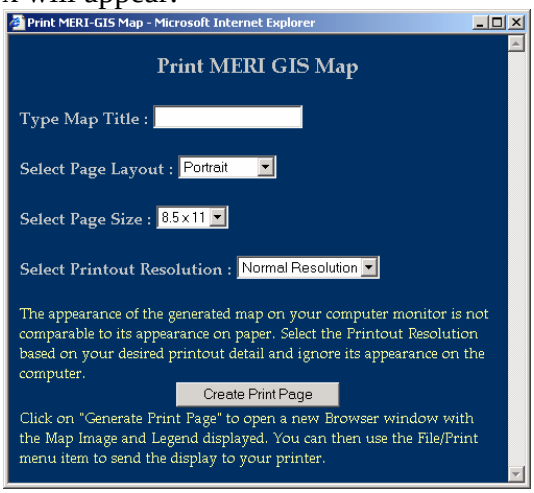


Figure 7.1 Print Dialog box

You may choose any title for your map in the “Type Map Title” field. Next, you have the option of selecting a page layout. The page layout of your map can have two (2) different choices: ‘portrait’ or ‘landscape’. The difference is the way the map is viewed once printed. Select ‘portrait’ to set the map along the vertical sides of the page. Select ‘landscape’ to set the map along the horizontal sides of the page.

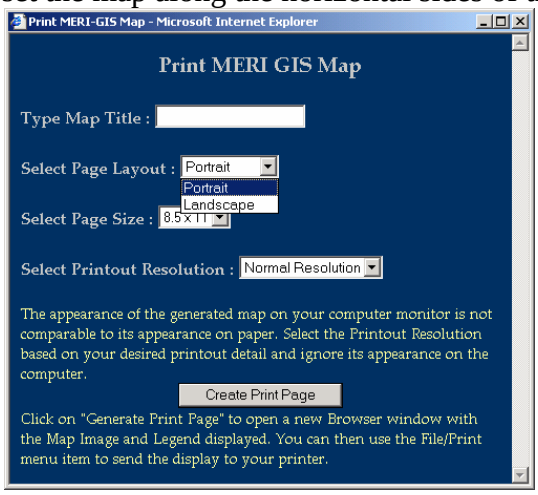


Figure 7.2 Select Page Layout

Depending on how large you want the map to appear, you may change the ‘page size’ to the desired measurements given in the “select page size” field:

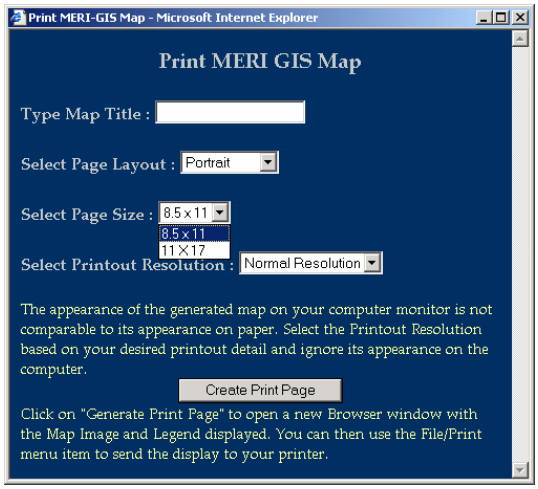


Figure 7.3 Select Page Size

The resolution of your printout can also be adjusted depending on how clear and detailed you want your map to be. You may choose Normal, Low, or High Resolution in the "Select Printout Resolution" field. If you have many layers, it is recommended that you select a low resolution.

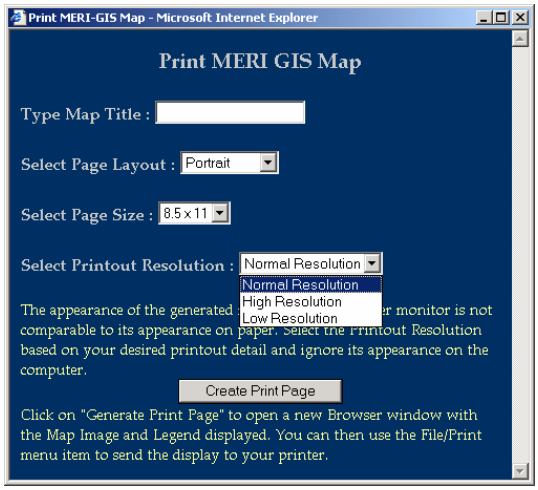


Figure 7.4 Select Printout Resolutions

Click on Create Print Page

button. This simplified form of printing is very generic. The printing in this application will be affected based upon the settings you have chosen before. You cannot modify the map layout any further other than those settings. Whatever you see on the Map View Frame is what will display and eventually print. The map will look like the following illustration:

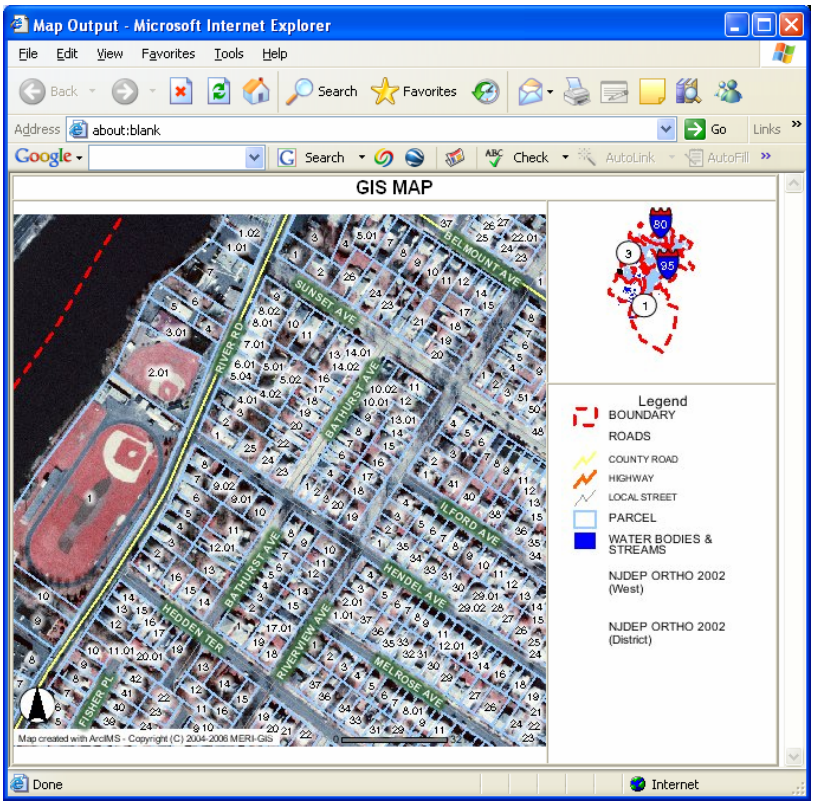
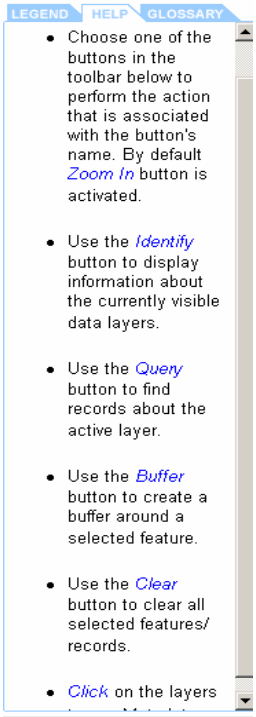


Figure 7.5 Illustration of the generated Map Layout

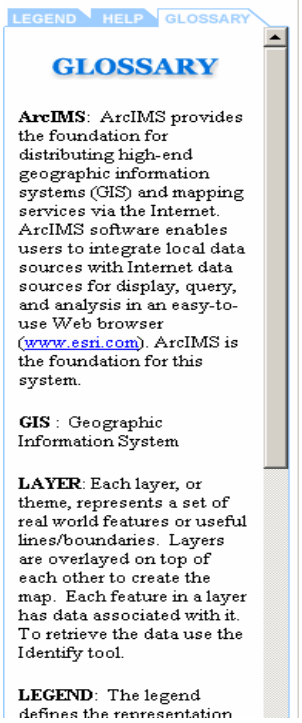
8.0 INFORMATION TABS

Located right side of the map frame is a tabbed information field labeled 'Legend', 'Help', and 'Glossary'. Clicking on the tabs will bring up different types of information in the box. The tabs are organized as follows:

Legend Tab



Help Tab



Glossary Tab

Figure 8.1 Information Tabs

9.0 CHALLENGE EXERCISES

Municipal Parcel Map Application:

9.1 Perform the following queries using the Search by Owner button. How many parcels does the Borough of North Arlington own?
Note: Remember the owner name must match exactly what is stored in the parcel database (MOD4).

9.2 In the same application, how do you query specific block and lots? Can you query multiple block and lots? Look for Block 43, Lot 12. Who owns this parcel and how big is this property?

9.3 In the same application, how many parcels are industrial and are less than 60 acres? (*Type for minimum acres 0 and for maximum acres 60*)

9.4 When searching for properties under the 'Search by Facility,' how many parcels are highlighted when you search for "park"? Are these all parks?

9.5 You have been notified that Block 30, Lot 2 has been designated a redevelopment area. You as the Borough Administrator need to notify property owners within 200 feet of the property in question. How many properties are highlighted? If you have time, you can print your results. You can also export the results into Microsoft Excel (try this, and click "Export to Excel;" click on "Save"). **Note:** Save file into C:\GIS_training\.

Municipal Maps Application:

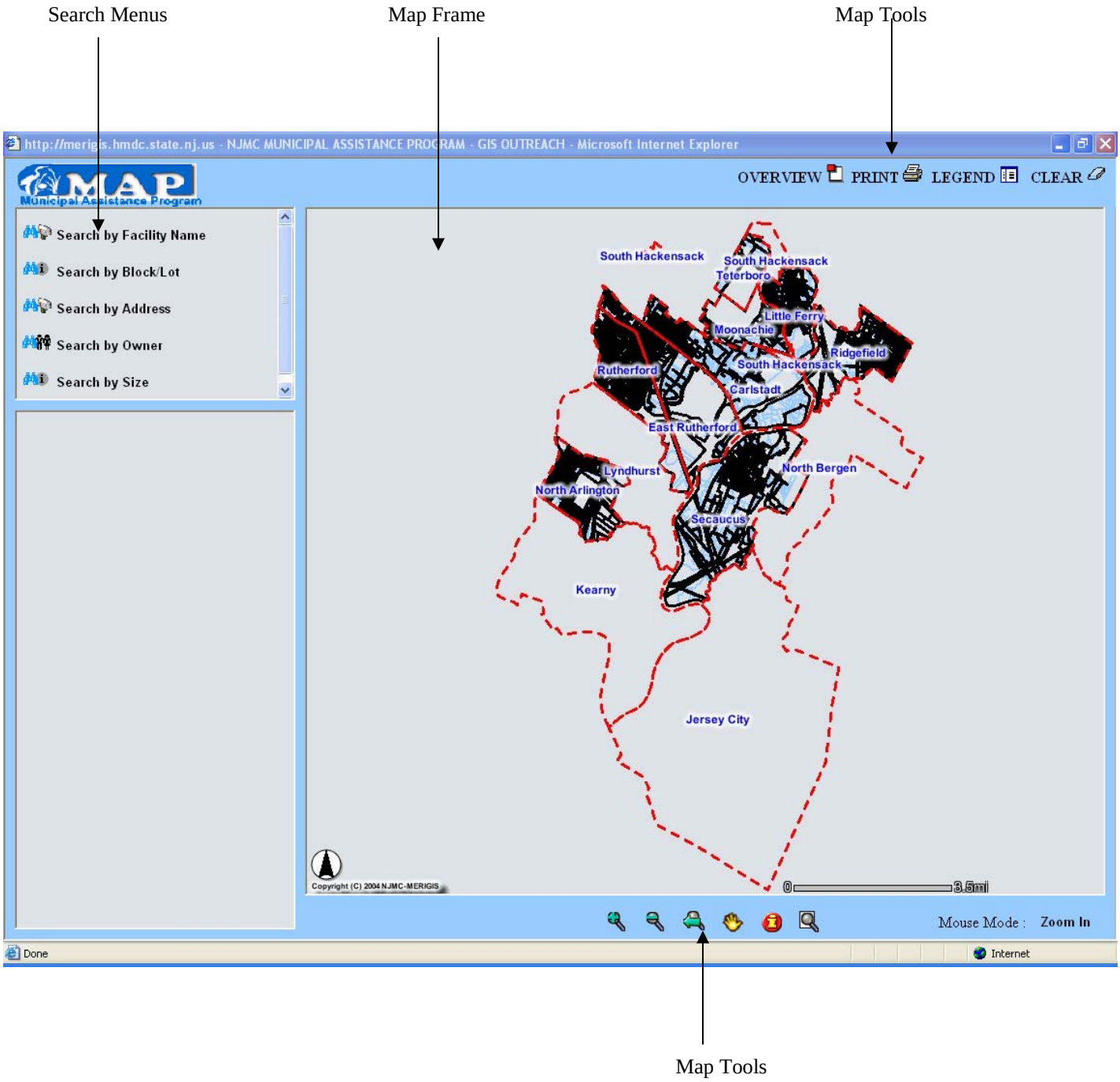
9.6 In the ***Municipal Maps*** application, perform queries using the

button. Using this tool identify how many parcels are located in Block 64 (North Arlington).

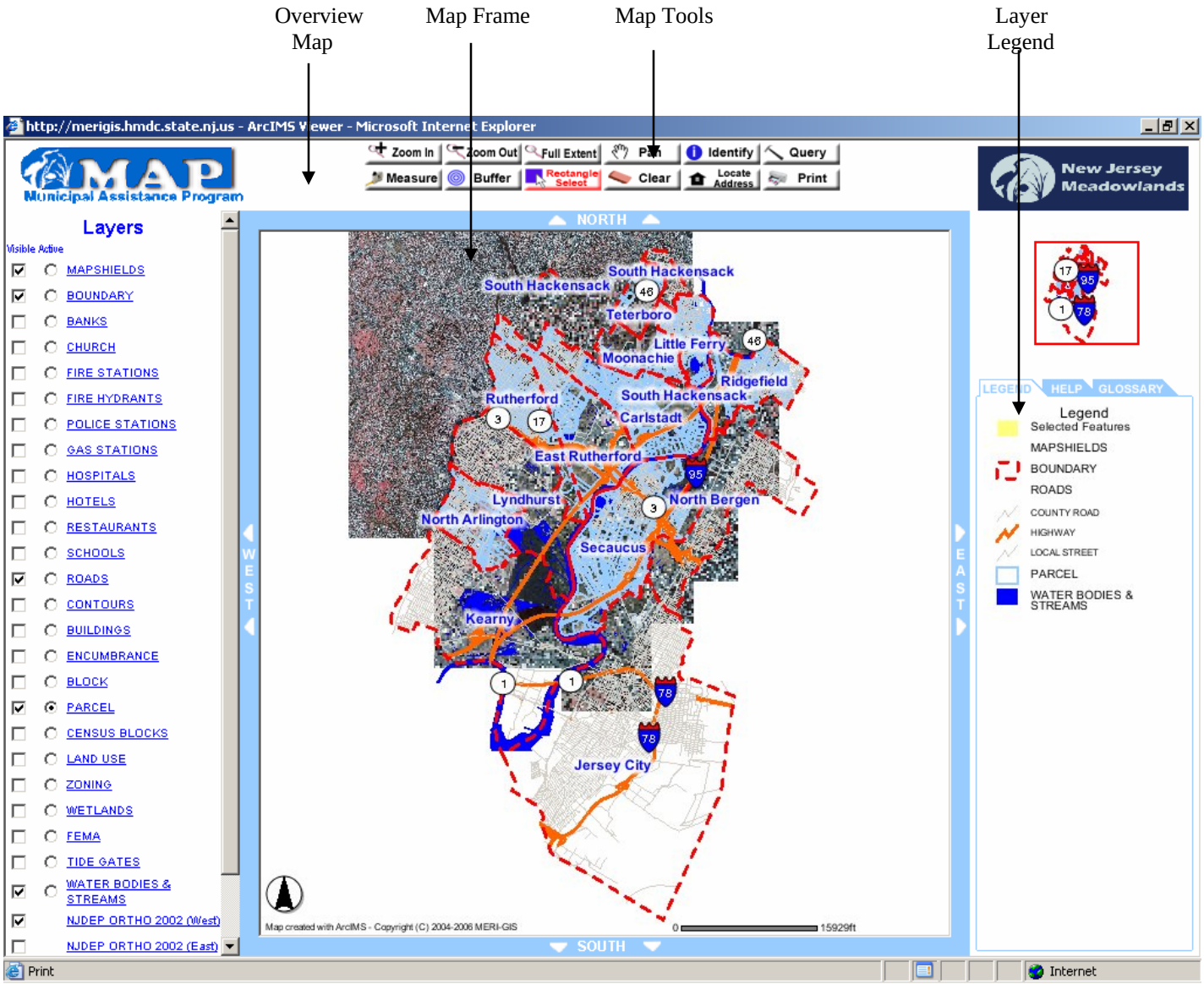
9.7 Which parcel is the largest in this Block? Are there any public properties on this block?

9.8 In order to fulfill and respond to their senior citizens, the police department needs to identify where a larger population of their citizens are. Which record or block number has the most amount of senior citizens? *(Hint: Age 65 & up ≥ 50).*

Municipal Parcel Map Application



Municipal Maps Application



APPENDIX I Zoning and Land Use Codes

The following codes represent the different types of Zoning and Land Use existing in the Borough of North Arlington as well as other neighboring towns existing in or out of the meadowlands district. These are the codes that need to be used when querying in either the Parcel or the Zoning layers.

- ***ZONING***

CODE	LABEL
AV	Aviation facilities
CP	Commercial Park
EC	Environmental Conservation
HI	Heavy Industrial
HC	Highway Commercial
IA	Intermodal A
IB	Intermodal B
LIA	Light Industrial A
LIB	Light Industrial B
LDR	Low Density Residential
NC	Neighborhood Commercial
PR	Planned Residential
PU	Public Utilities
RC	Regional Commercial
SEA	Sports and Exposition
TC	Transportation Center
WR	Waterfront Recreation
RRR	Roads, Rails, ROWs
000	Unclassified
RA	Redevelopment Area
MZ	Multiple Zones
CZC-SECA	Commercial Zone C – Secaucus
LI1-SECA	Light Industrial Zone 1 – Secaucus
RZA-SECA	Residential Zone A - Secaucus
LID-TET	Light Industrial & Distribution Zone – Teterboro
RA1-TET	Redevelopment Area 1 Zone – Teterboro

RA2-TET	Redevelopment Area 2 Zone – Teterboro
PA	Parks and Recreation
C-CARL	Commercial Zone – Carlstadt
LI-CARL	Light Industrial – Carlstadt
LDR-TET	Low Density Residential – Teterboro
MCZ-CARL	Mixed Commercial Zone – Carlstadt
RZ-CARL	Residential Zone – Carlstadt
RZB-SECA	Residential Zone B – Secaucus
MNF-MOON	Manufacturing Zone – Moonachie
R1-MOON	1-Family Residential Zone – Moonachie
R2-MOON	2-Family Residential Zone – Moonachie
B1-MOON	General Business Zone – Moonachie
B2-MOON	Limited Business Zone – Moonachie
R1-ER	Low Density Residential - E Rutherford
R2-ER	Medium Density Residential - E Rutherford
R3-ER	Multi-Family Residential - E Rutherford
NC-ER	Neighborhood Commercial - E Rutherford
RC-ER	Regional Commercial - E Rutherford
PCD-ER	Planned Commercial Development - E Rutherford
RD1- ER	Redevelopment-1 - E Rutherford
I- ER	Light Industrial
R1-NA	1-Family Residential - N Arlington
R2-NA	1&2-Family Residential - N Arlington
RRRA-NA	Ridge Road Redevelopment Area - N Arlington
PARA-NA	Porete Avenue Redevelopment Area - N Arlington
R3-NA	Multi-Family Residential - N Arlington
C2-NA	Commercial - N Arlington

C1-NA	Commercial - N Arlington
I1-NA	Light Industrial - N Arlington
C3-NA	Cemetery - N Arlington
P/SP-NA	Public/Semi-Public
P/OS-NA	Parks & Open Space - N Arlington
W/C-NA	Waterways & Creeks - N Arlington
R1-RU	Single Family Residential – Rutherford
R1A-RU	Single Family Residential – Rutherford
R1B-RU	Single Family Residential – Rutherford
R2-RU	Two Family Residential – Rutherford
R4-RU	Five Story Apartment – Rutherford
B1-RU	Three Story Office – Rutherford
B2-RU	Five Story Office – Rutherford
B3-RU	Three Story Office/Retail – Rutherford
B3/SH-RU	Business/Senior Housing – Rutherford
B4-RU	Business/Light Industrial – Rutherford
ORD-RU	Ten Story Office – Research and Distribution – Rutherford
HC-RU	Highway Commercial Development – Rutherford
PCD-RU	Planned Commercial Development – Rutherford
R3-RU	Three Story Apartment – Rutherford
UR1A-RU	University/Residential, Single Family – Rutherford
C-RF	Commercial – Ridgefield
C/HRH-RF	Commercial/High Rise Hotel – Ridgefield
GA/TH C-RF	GA/TH Cluster – Ridgefield
LM-RF	Light Manufacturing – Ridgefield
NB-RF	Neighborhood Business – Ridgefield
O/TH-RF	Office/TH – Ridgefield

OC-RF	Office Commercial – Ridgefield
OMR-RF	Office Mid Rise – Ridgefield
OMRH-RF	Office Mid Rise Hotel – Ridgefield
OFR-RF	One Family Residential – Ridgefield
P/SP-RF	Public/Semi Public – Ridgefield
TH/SRCH-RF	TH/SR Citizens Housing – Ridgefield
T-RF	Town Homes – Ridgefield
TFR-RF	Two Family Residential - Ridgefield
RA-LF	One Family Residential - Little Ferry
RB-LF	One & Two Family Residential - Little Ferry
RM-LF	Multifamily Residential - Little Ferry
BH-LF	Highway & Regional Business - Little Ferry
BN-LF	Neighborhood Business - Little Ferry
IR-LF	Restricted Industrial - Little Ferry
IG-LF	General Industrial - Little Ferry
P-LF	Public Facilities - Little Ferry

- ***LAND USE***

CODE	LABEL
AL	Altered Lands
CO	Commercial Office
CR	Commercial Retail
HM	Hotels and Motels
IND	Industrial
ICC	Industrial & Commercial Complex
PQP	Public & Quasi Public Services
RL	Recreational Land

RES	Residential
TRS	Transportation
VAC	Vacant Land
WET	Wetlands
000	Unclassified
CU	Communication Utility
MU	Multiple Uses
WAT	Water

APPENDIX II Parcel Attributes Description (Municipal Maps Application)

ATTRIBUTE NAME	DESCRIPTION
REC	Record number (Arc IMS Related)
PARCELID	Parcel Identification number (GIS – Related)
PROJECKEY	Unique Identification number (composed of Municipal Code + Block + Lot numbers)
BLOCK	Block number
LOT	Lot number
OLDBLOCK	Old Block number
OLDLOT	Old Lot number
OWNERID	Owner Identification number
MUNICIPALCODE	Municipal Code
QUALIFIER	District Qualifier (inside or outside NJMC)
FACILITYNAME	Facility Name
PROPERTYLOCATION	Property Location (parcel address)
PARCELTYPE	Parcel Type based on Mod4 (Ownership)
ACRES	Acreage of Parcel (AREA/43560)
LANDUSECODE	Land Use Code (see Appendix I)
ZONECODE	Zoning Code (see Appendix I)
NOTES	Other relevant information
DESCRIPTION	Description of the parcel (i.e. restaurants, banks, etc)

APPENDIX III MUNICIPAL CODE DESCRIPTION (Municipal Maps Application)

MUNICIPAL CODES	MUNICIPAL NAMES	PHASE
205	CARLSTADT	1
212	EAST RUTHERFORD	2
230	LITTLE FERRY	2
232	LYNDHURST	3
237	MOONACHIE	1
239	NORTH ARLINGTON	2
249	RIDGEFIELD	2
256	RUTHERFORD	2
259	SOUTH HACKENSACK	3
262	TETERBORO	1
906	JERSEY CITY	4
907	KEARNY	3
908	NORTH BERGEN	3
909	SECAUCUS	1

References

1. New Jersey Meadowlands Commission
   http://www.njmeadowlands.gov/

2. Meadowlands Environments Research Institute
   http://meri.njmeadowlands.gov/

3. Meadowlands Environments Research Institute GIS Document Download
   http://meri.njmeadowlands.gov/gis/downloads.html

4. GIS Municipal Map Service Access
   http://meri.njmeadowlands.gov/gis/maps.html

5. GIS Interactive Map Help Document
   http://meri.njmeadowlands.gov/gis/help.html

6. NJ Geographic Information Network
   https://njgin.state.nj.us/NJ_NJGINExplorer/index.jsp

7. NJDEP Geographic Information System
   http://www.nj.gov/dep/gis/

8. NJDEP Geographic Information System Interactive Mapping
   http://www.nj.gov/dep/gis/newmapping.htm

9. NJDEP Geographic Information System Downloads
   http://www.state.nj.us/dep/gis/download.htm

10. NJDEP I-Map Tutorial
    http://www.state.nj.us/dep/gis/imapnj/imapnj.htm

11. NJ Office of Emergency Management
    http://www.state.nj.us/njoem/association.html

12. Bergen County Office of Emergency Management
    http://www.bcoem.org/

13. Hudson County
    http://www.hudsoncountynj.org

Glossary

Municipal Assistance Program (MAP): An imitative developed by the NJMC to establish a state of art technology in acquiring and updating relevant GIS datasets that will benefit the Meadowlands municipalities and the NJMC.

NJMC: New Jersey Meadowlands Commission

MERI: Meadowlands Environmental Research Institute

GIS: Geographic Information Systems

Query: To interrogate a collection of data such as records in a database. The term may also be used to search a single file or collection of files such as HTML files on the Web.

Layers: A collection of similar geographic features – such as rivers, lakes, countries or cities – of a particular area or place for display on a map.

Attribute: A characteristic of a map feature. Attributes of a parcel might include its block, lot or municipality.

Field: A column in a table. Each field contains the values for a single attribute.

Buffer: A zone of a specified distance around features in coverage. Buffers can be set at constant or variable distance based on feature attributes. The resulting buffer zones form polygonal coverages.

MOD4: Program regulated by NJ division of taxation that requires local municipalities to submit property specific tax information data and readily available format.

Feature Class: A collection of spatial data (geographic features) with the same geometry type, such as a point, line or polygon.

Geodatabase: A relational database management system that hosts objects in the form of geographic features and attributes.

Metadata: Information about a data set. Metadata for geographical data may include the source of the data; its creation date and format; its projection, scale, resolution, and accuracy; and its reliability with regard to some standard.