

Network Analysis Workflow – Service Areas

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For an introduction to the Network Analyst tools, we recommend going through the Network Analyst tutorial

- On the web, it can be found on the ArcGIS 9.2 Help – Tutorials site:
<http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?TopicName=Tutorials>

See the ArcGIS 9.2 Help for details about using Network Analyst -
http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?TopicName=Types_of_network_analyses

Set up

First, make sure all your data layers are in the same coordinate system. See the Tip Sheet “Setting up for spatial analysis”

Setting up for a network analysis is similar regardless of which analysis option you are doing (covered in Exercises 1 (shape file) and 2 (geodatabase) of the Network_Analyst_Tutorial.pdf)

The first step is to create a network data set from your street centerline file. You do this in ArcCatalog.

ArcCatalog
Enable Network Analyst extension
Tools – Extensions – check Network Analyst

Do the same in ArcMap

Create network data set – this is done in ArcCatalog

1. right-click on a street centerline layer
2. Choose New Network Dataset

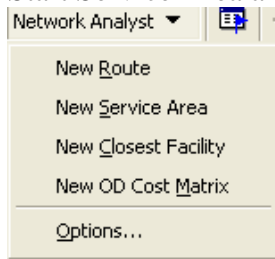
See ArcGIS Help for details of creating a network data set -
http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?id=3563&pid=3562&topicname=Creating_a_network_dataset

Delineate a Service Area

See ArcGIS Help for details about how to set parameters for the Service Area Analysis -
http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?TopicName=Finding_a_Service_Area

1. Start ArcMap
2. Enable Network Analyst
3. Make visible the Network Analyst Toolbar
4. Add Network Data set created in ArcCatalog (e.g., streets)
5. Add facilities that will be the centers for the service area (e.g., hospitals)

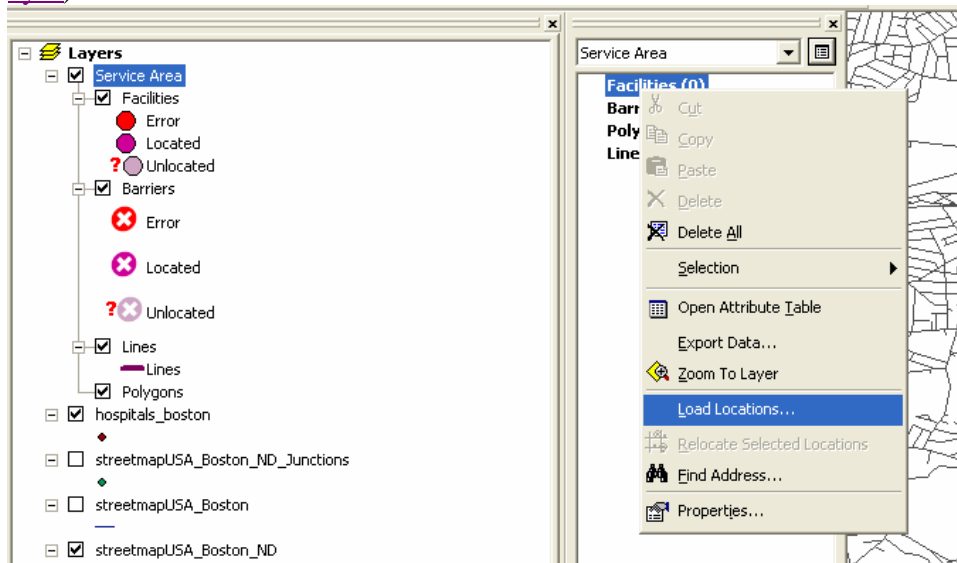
6. Start Service Area analysis (choose *Network Analyst – New Service Area*)

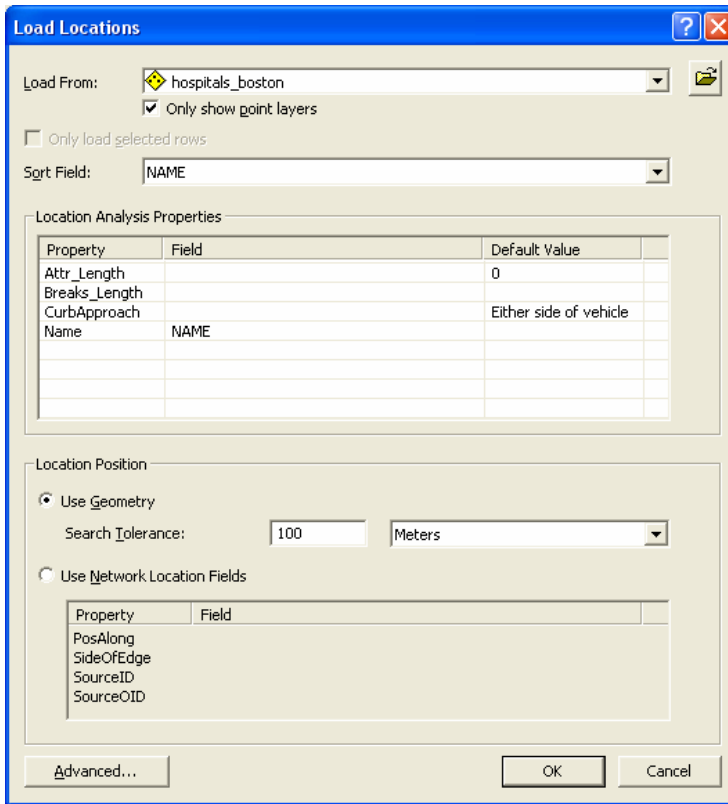


7. Show Network Analyst Window - 

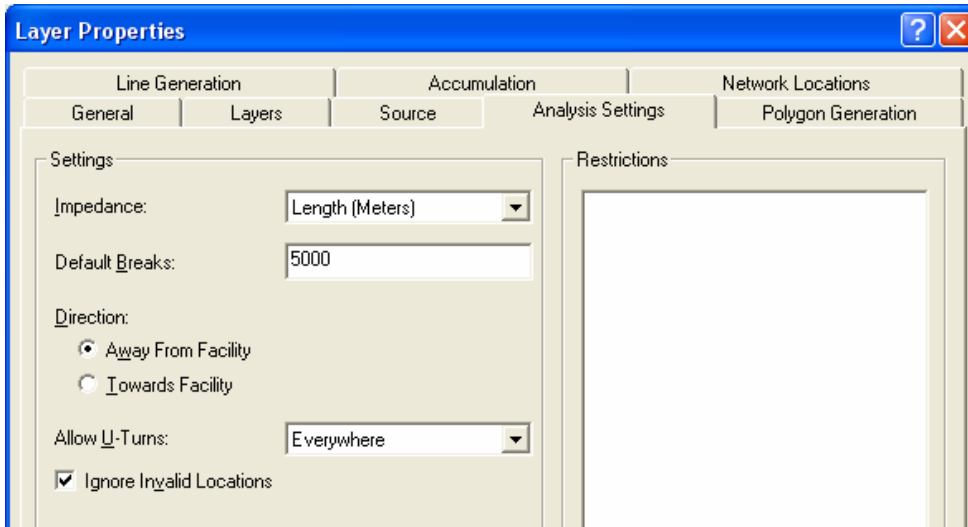
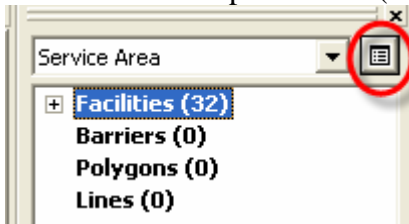
8. Load Facilities (e.g., Hospitals) – right click on Facilities in Network Analyst Window and choose Load Facilities – be sure to specify search tolerance – how far a facility can be from the street to be associated with that street location. (see ArcGIS 9.2 help -

[http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?TopicName=Load locations from a feature layer](http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?TopicName=Load%20locations%20from%20a%20feature%20layer))





9. Set Service Area parameters (e.g., distances to analyze, line and polygon generation)



10. Solve (click on Solve icon) -

