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Measuring Accessibility to Public Transit in Pasadena, CA

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City of Pasadena, CA

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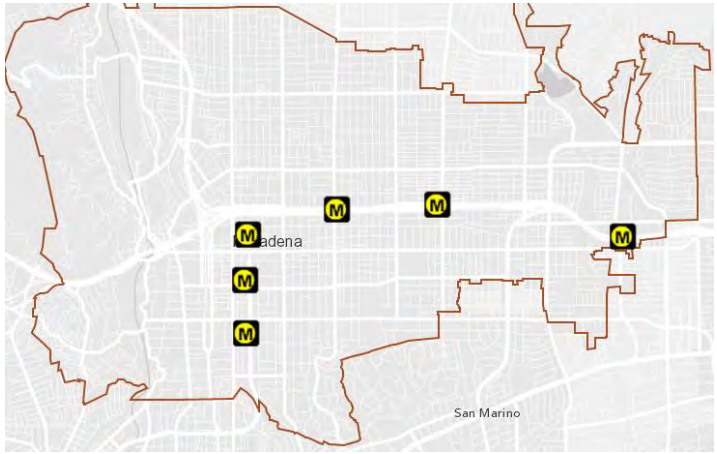
- Located in Los Angeles County, CA
- Home to the Rose Bowl, Rose Parade, NASA's Jet Propulsion Lab, CalTech, and many historic home and neighborhoods
- 23.5 Sq Mi. with 138,000 residents
- 6 Light Rail Stations



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Reviewing TOD Standards

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What are the impacts of changing the criteria of Transit Oriented Development (TOD) Parking Standards?

TOD Parking Standards Criteria: Accessibility to Transit

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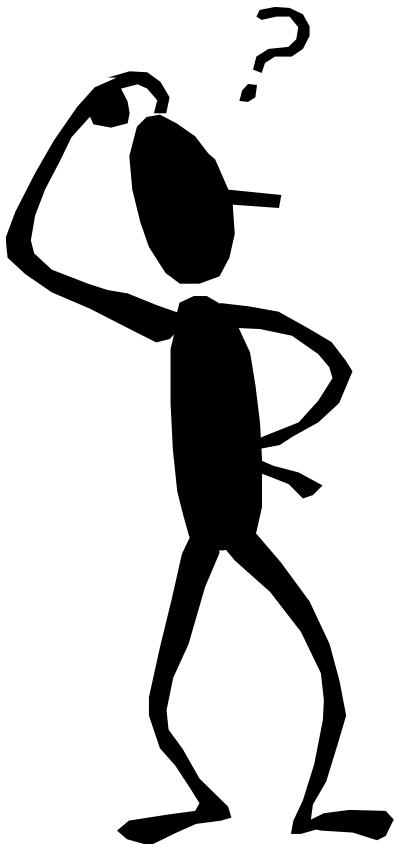
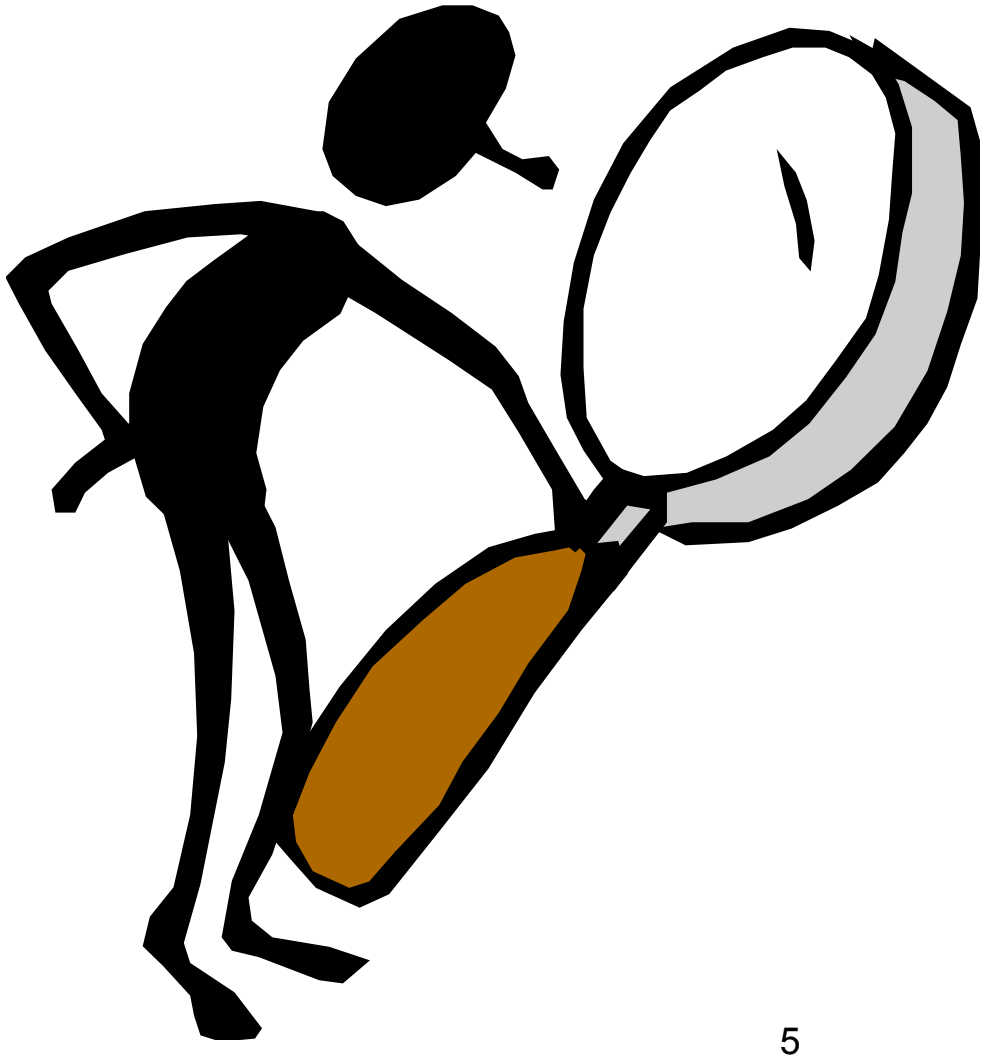
How to measure Transit accessibility?



Performing the Analysis



Accessibility Analysis - Basic Steps

- Prepare Data
  - > Street Network, Destination Points
- Perform Analysis
  - > Create Cost Surface –
    - Euclidean Distance (tool), Reclassify (tool)
  - > Perform Cost Distance (tool)
  - > Convert Final Analysis Raster to Polygon
    - Reclassify, Covert to Polygon

Prepare Data

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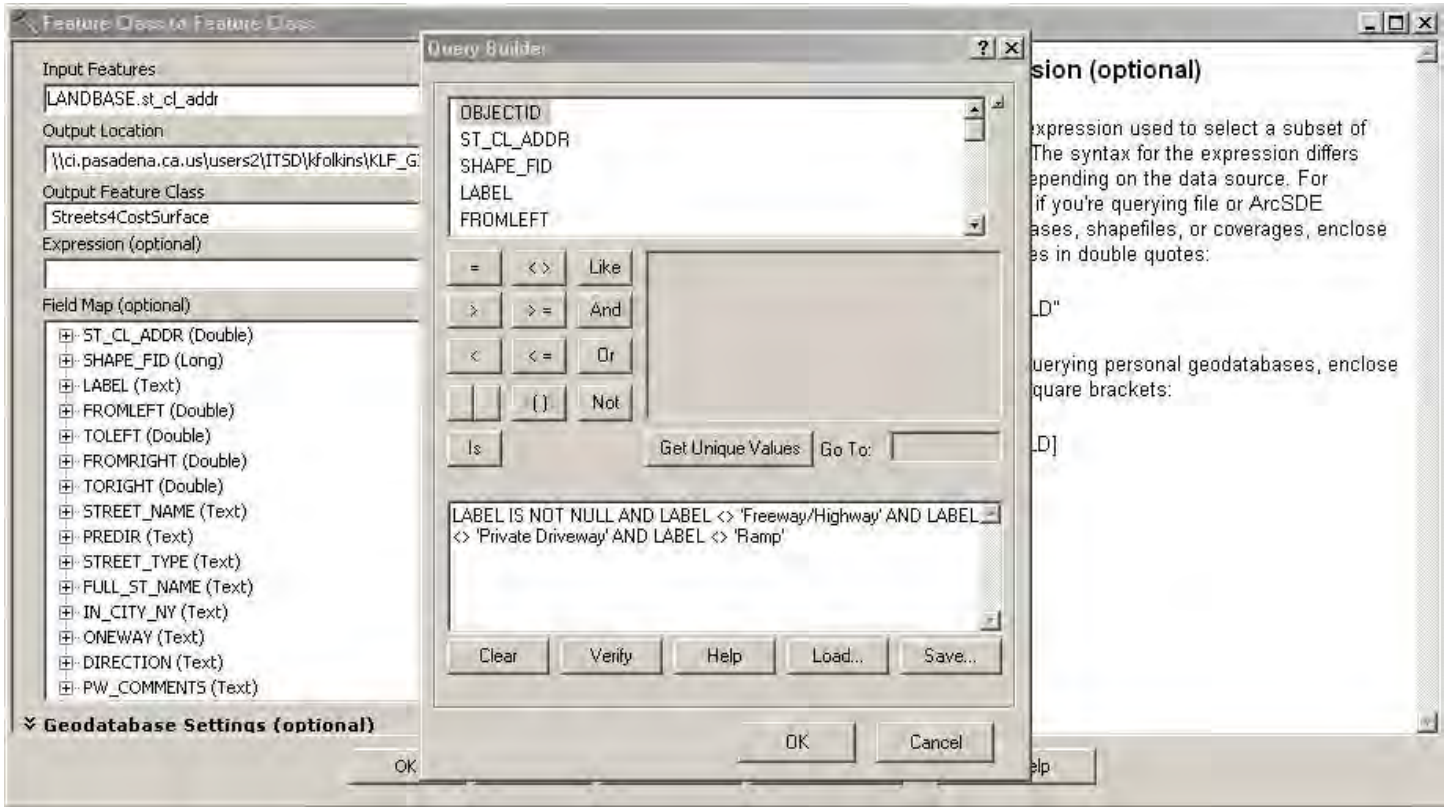
- Street Network



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Prepare Data

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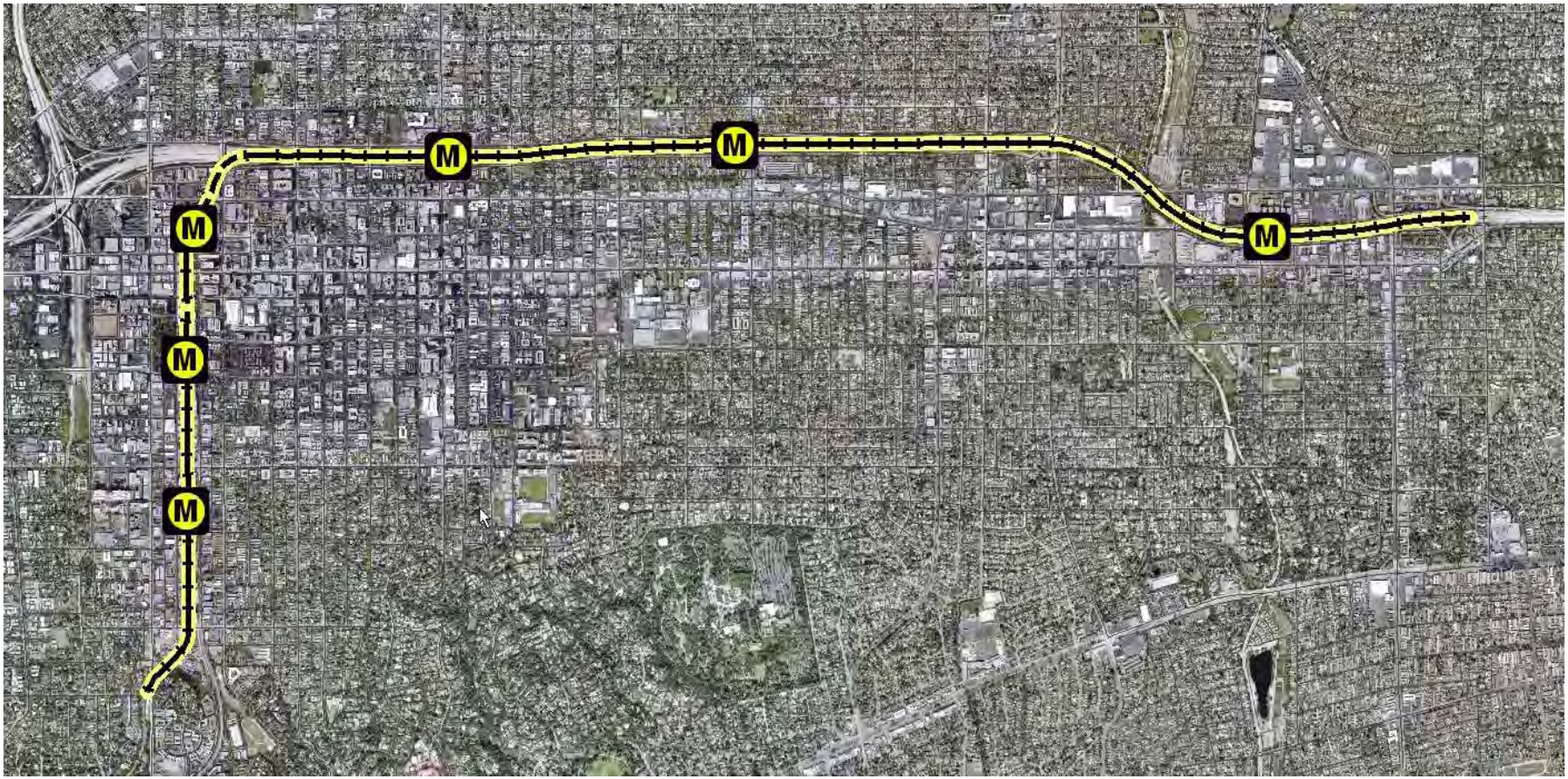
- Destination Point Layer



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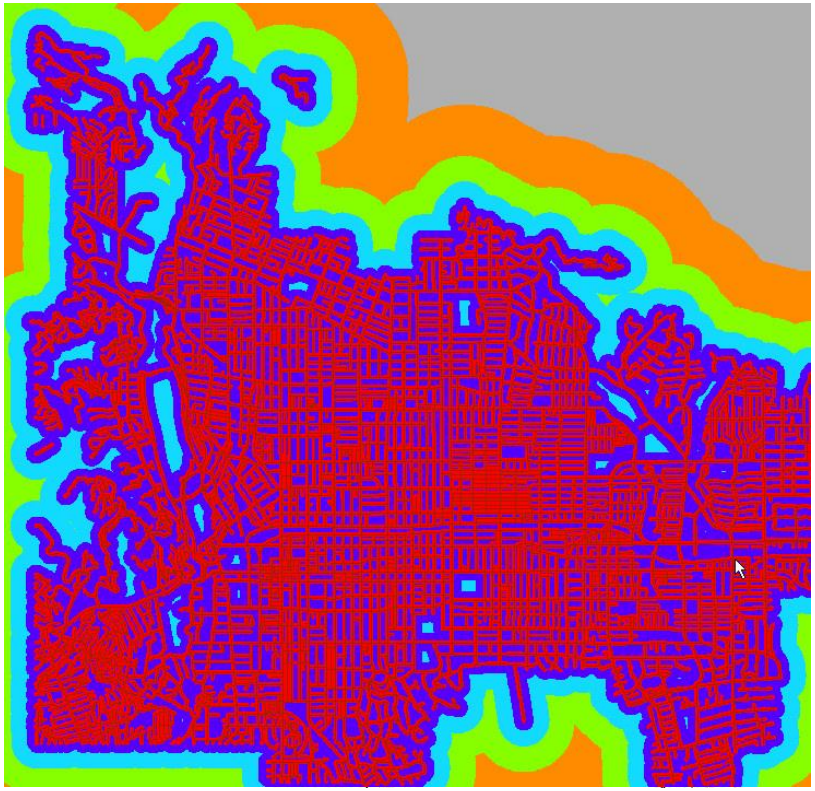
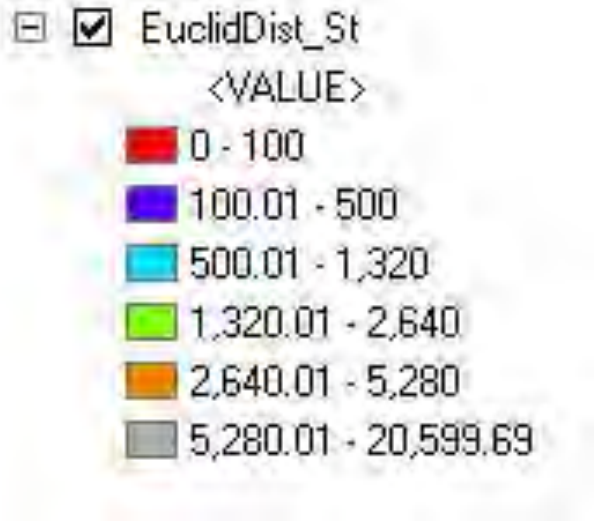
Create Cost Surface

- Euclidean Distance
  - > 30 ft cell size gives good result





Create Cost Surface

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- Reclassify
  - > Assigns a value, or cost, of travel to each cell

Reclassification

Old values	New values
0 - 100	1
100 - 500	2
500 - 1320	3
1320 - 2640	4
2640 - 5280	5
5280 - 20599.691406	6
NoData	NoData

Classify...
Unique
Add Entry
Delete Entries
Load...
Save...
Reverse New Values
Precision...

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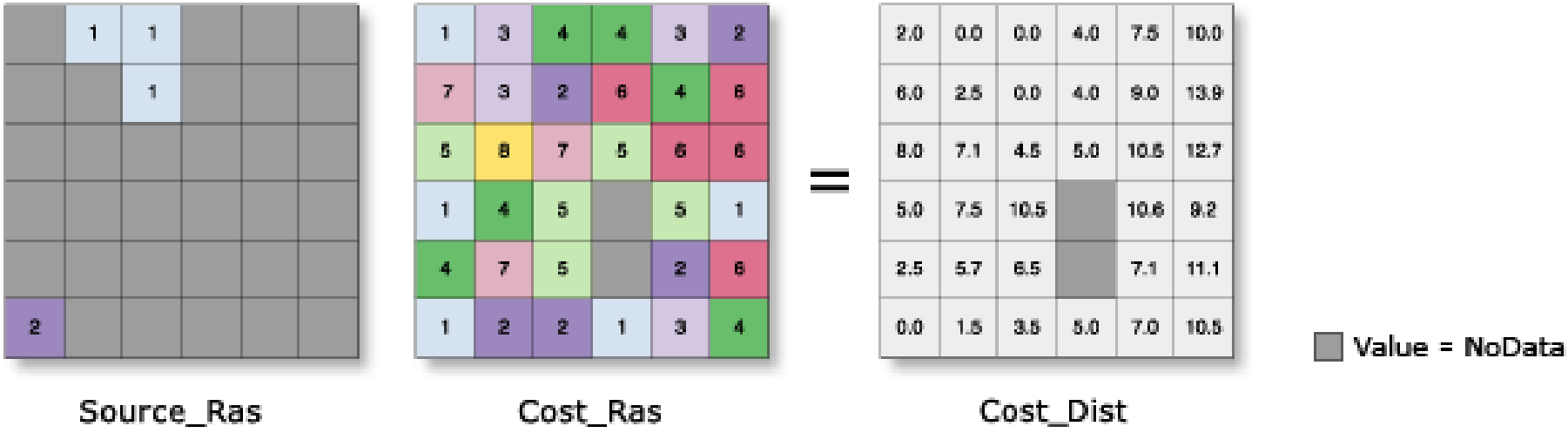
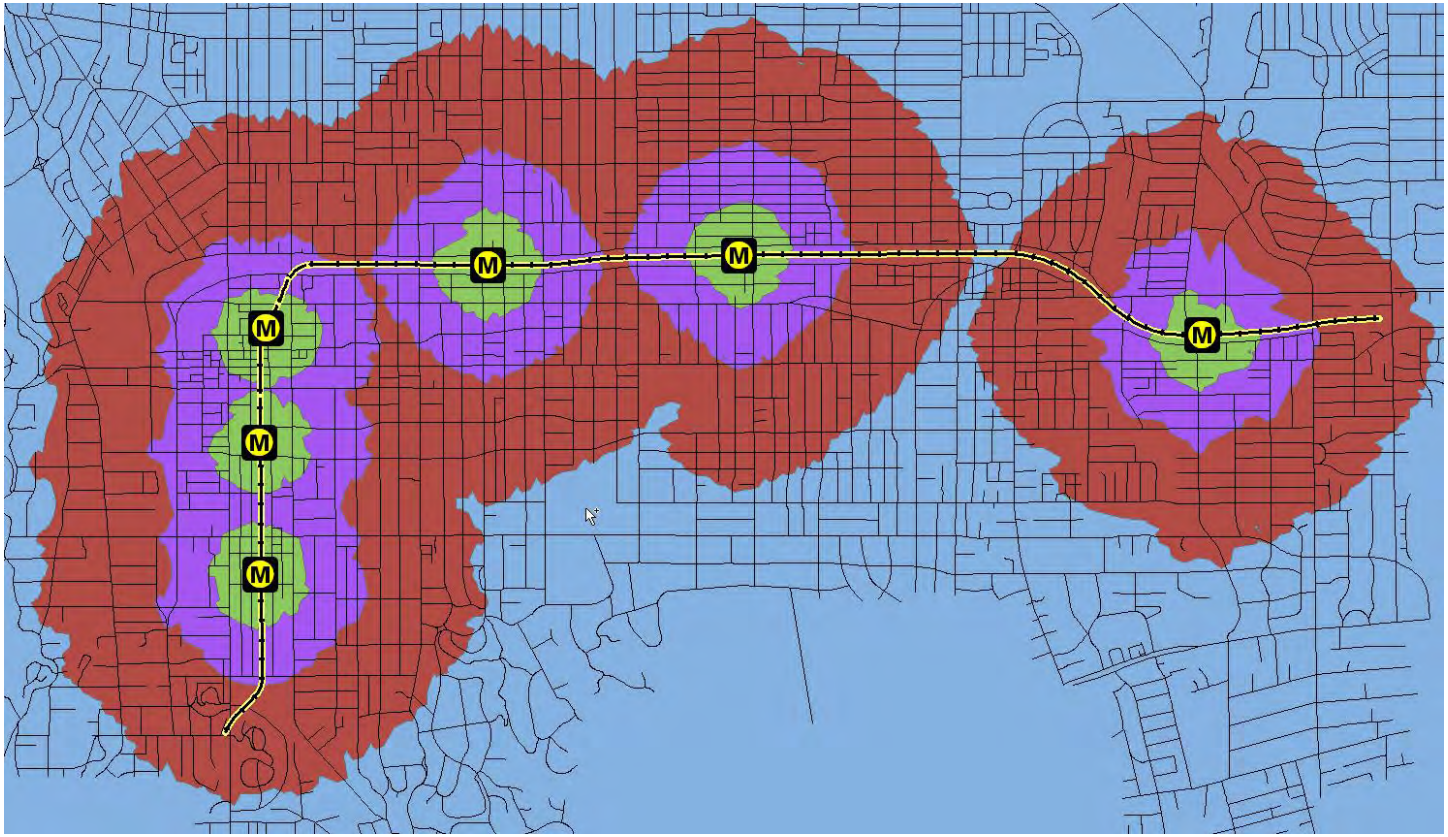
Perform Cost Distance

- Final Analysis: Merging



Convert Analysis Raster to Polygon

- Reclassify, Convert to Polygon



Final Analysis - Buffer Comparison

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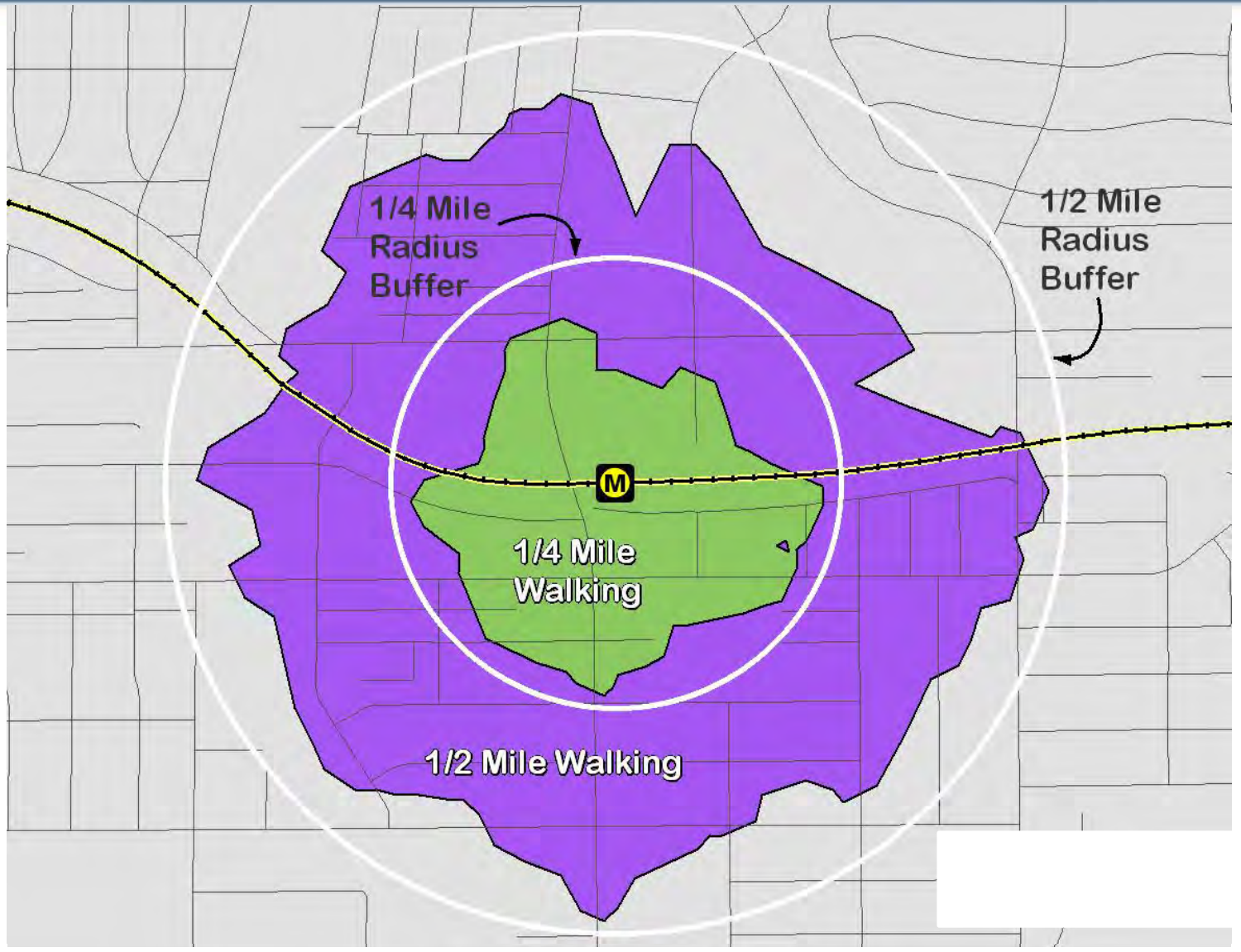

Next Steps, Lessons Learned

- Build model for automation
- Developing true Pedestrian Network
- Refining Destination points: i.e. multiple entrances

Alternate Analysis

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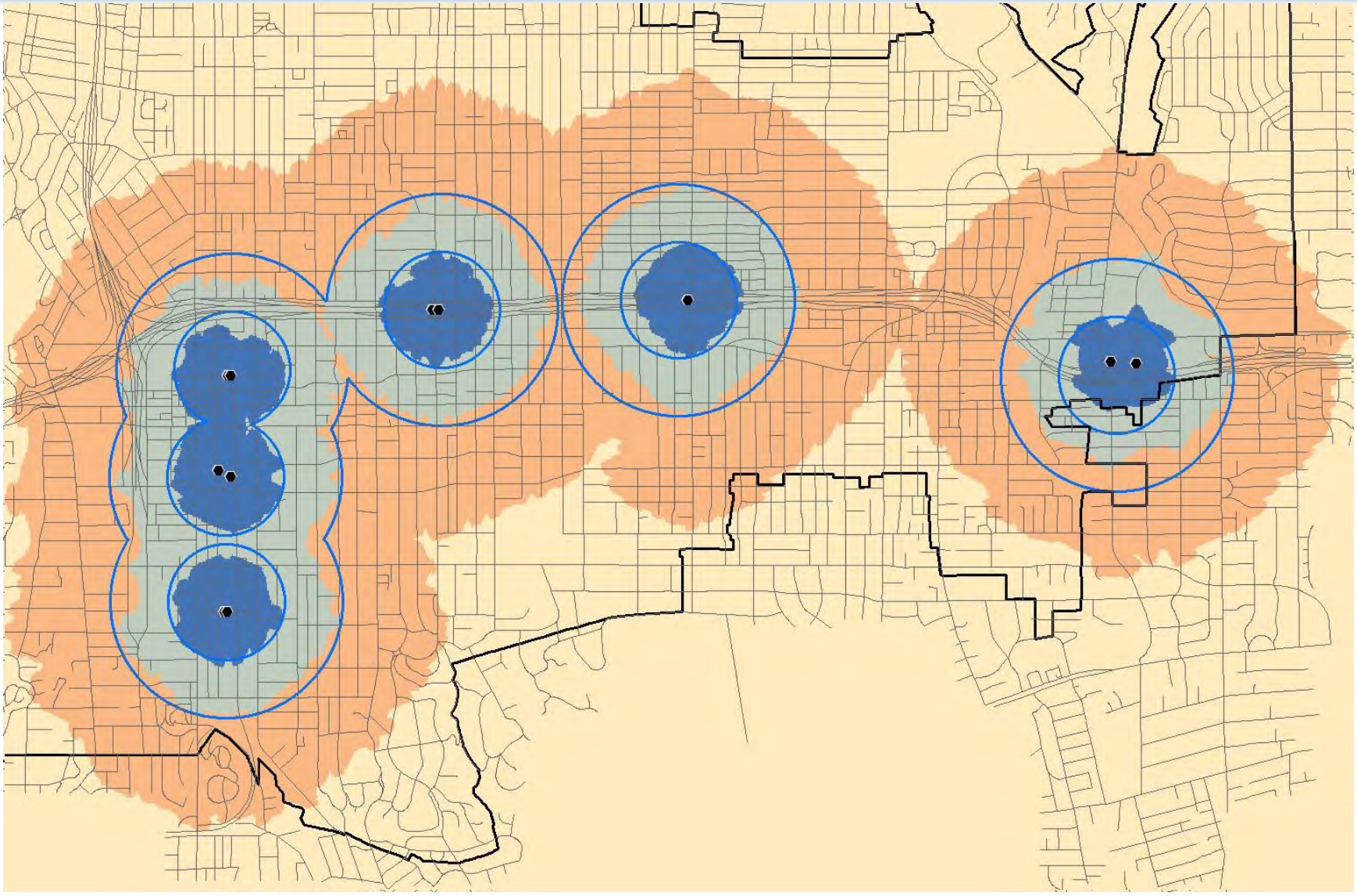

Special Thanks To…….

- Scott Reimers – City of Pasadena Planning Dept.
- Rhonda Glennon – ESRI:
  - http://blogs.esri.com/esri/arcgis/2011/06/30/park-analysis-and-design/

Questions?