Bicycle Model – State of the Practice

- MTA Board motion to develop bicycle model
- 2 Phase approach due to complexity
- Phase I – Web-based Sketch Plan Tool
  - Community level analysis
  - Measure trips by jurisdiction
  - Available to Jurisdictions
- Phase II – Route Choice Model
  - Integrate into MTA Travel Demand Model
What Does Bicycle Sketch Plan Tool Do?

- Phase I – Web-based Sketch Plan Tool
  - Jurisdiction scenario analysis – bicycle projects
  - Measure Number of Trips
    - Work
    - Recreational
  - Performance Measures
    - Mobility
    - Environmental
    - Economic
    - Public Health
Web-based Bicycle Sketch Plan: Community Level
# Web-based Bicycle Sketch Tool: Community Level

## Bike Analysis

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Scenario 1</th>
<th>Scenario 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>Pasadena</td>
<td>Pasadena</td>
</tr>
<tr>
<td>Total Projects Analyzed</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Total Cost ($)</td>
<td>1,040,000</td>
<td>30,000</td>
</tr>
</tbody>
</table>

### Project Type Breakdown

<table>
<thead>
<tr>
<th>Legend</th>
<th>Scenario 1</th>
<th>Scenario 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bikeways (Bike Path)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bikeways (Separated Cycle Track)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bikeways (Bike Lane)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bikeways (Bike Boulevard)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Worksite Bicycle Amenities</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Transit Station Bike Parking</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bikesharing</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

*All results are annual values reported in the year 2035, compared to a year 2035 scenario in which the analyzed projects are not implemented.*
What are the results of Test Runs?

• Phase I – Web-based Sketch Plan Model
  – Useful in analyzing their bicycle projects. However, made suggestions to improve its utility:
    • Easier project entry
    • Quicker analysis of bicycle projects
    • Update socio-economic data
    • Enhance mapping capabilities
  – Therefore, we will make a series of enhancements to streamline the user experience, improve its flexibility and response time, and bolster its performance reporting capabilities.
What Will the Integrated Bicycle Travel Demand Model Do?

- **Phase II – Route Choice Travel Demand Model**
  - Build upon the bicycle sketch plan tool
  - Enhance MTA Travel Demand Model with bicycle mode and route choice components
  - Show where bicycle trips originate and the routes they can potentially take to destinations
  - Evaluate proposed bicycle investments
  - Conduct corridor analysis
Next Steps

• Work with the other jurisdictions on how to operate the Sketch Plan Tool
• Integrate route choice model into MTA Travel Demand Model
• Scheduled to Complete in Mid-2015