Simplified Trips-On-Project Software (STOPS) for Kansas City

presented by
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• STOPS was used to analyze
  – Existing Streetcar
    • Red
  – New streetcars
    • Blue
    • Green
    • Orange
  – New BRT
    • Purple
Focus of Presentation

• Calibration of STOPS in Kansas City
  – Station Groups = show group to group ridership based on station boarding and alighting
  – District Groups = groups of 1 or more zones used to aggregate travel data for calibration and reporting travel flows
• Define stations and districts for calibration
  – CBD
  – Major groupings of other destinations
  – Balancing act between number of zone groups/districts and market characteristics
Initial Station Groupings
322 Stations (BRT & Streetcar)
16 Groups
Calibration of Stations

Adjustment Factors for Initial Station to Station Grouping - Transit Trip Movement
Calibration of Stations

Final Station Groupings
296 Stations (BRT, Streetcar & Local Bus)
20 Groups
Calibration of Stations

Adjustment Factors for Final Station to Station Grouping - Transit Trip Movement
Calibration of Station

Tips
• Analyze results of ridership boardings by station
• Adjustment factors ideally 1.00
• Add in local bus stops to adjust existing calibration
• Create grouping based on similar land-use characteristics/densities and transit service
• Create grouping based on similar access modes/accessibility to the stations
Initial District Groupings
50 Groups
Calibration of Stations

Final District Groupings
30 Groups
Tips
• Focus on project corridor
  • Analyze ridership of the routes
• Base groupings on similar characteristics of the land-uses/market segment
• Districts typically increase in size as you move away from project corridor
### Average Weekday Transit Trips on Project Routes

<table>
<thead>
<tr>
<th>Route ID of Project Mode</th>
<th>Actual Corridor Ridership</th>
<th>Initial Districting</th>
<th>Final Districting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5,200</td>
<td>15,228</td>
<td>10,600</td>
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<tr>
<td>2</td>
<td>3,400</td>
<td>9,324</td>
<td>4,100</td>
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<tr>
<td>3</td>
<td>3,400</td>
<td>5,334</td>
<td>3,100</td>
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<tr>
<td>26</td>
<td>6,000</td>
<td>6,256</td>
<td>7,000</td>
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<tr>
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<td>5,800</td>
<td>4,370</td>
<td>6,300</td>
</tr>
</tbody>
</table>
Acknowledgements and Thanks

- Robert Hosack, HNTB
- Brian Comer, HNTB