Urban Redevelopment Impact on Measuring and Utilizing Non-motorized Data

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Los Angeles Commutation Overview

- The average commute is 29.4 minutes.
- 1,745,818 workers [4]
- % is a measure of count and not VMT

<table>
<thead>
<tr>
<th>Mode</th>
<th>Occupancy %</th>
<th>Increase in Biking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving Alone</td>
<td>72.3</td>
<td></td>
</tr>
<tr>
<td>Walking</td>
<td>3.6</td>
<td>1.0</td>
</tr>
<tr>
<td>Carpools</td>
<td>10.7</td>
<td>6.0</td>
</tr>
<tr>
<td>Work at Home</td>
<td>5.4</td>
<td></td>
</tr>
<tr>
<td>Transit</td>
<td>7.3</td>
<td></td>
</tr>
<tr>
<td>Bicycles</td>
<td>0.6</td>
<td></td>
</tr>
</tbody>
</table>

%Target: Our Estimate 2025-2030
- 25-50
- 4-8
- 20
- 12.0
- 20-30
- 6-10
Data collection: Why?

Motorized Data:
- Determine volumes of traffic
- Turning movements
- Percentage of freight traffic
- Other roadway usage data

Non-Motorized Data:
- Health
- Economy of the city
- FEASIBILITY
- Quality

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Non-Motorized Data collection Techniques: 1. **Manual Counting**

- Qualitative factors:
  - Gender, race, and relative age.

- Data segregation:
  - Number of wheelchair users vs dog walkers.
  - Bicyclists with and without helmet.

- Data Storage:
  - Excel Reports
  - Visual tools and tables.

- Staff and volunteer **time**
- **Consistency** of data are two of the most challenging aspects.
- The amount of data collected is limited.
- Covers a short amount of time in a day.
- True activity and traffic patterns difficult to predict.
Non-Motorized Data collection Techniques : 2. Miovision Counting

✓ **About the method :**
• Count automobiles at intersections.
• Bicyclists and pedestrians may also be counted at an additional cost.
• These counts run for a 12-hour period, from 7 am to 7 pm.

✓ **Benefits Over Manual method:**
• Expectation of improved accuracy of count data.
• Counts are easily verifiable by reviewing the stored video.
• Counts are continual over 12 hours with no breaks.
• Fewer manhours are required (approx. 15 minutes to set up ).
• Can more easily get weekend counts.
• Includes public web portal for sharing traffic data. [8]

✓ **Data Storage:**
• Video file type.
1,030 centerline miles of roadway within its boundary
Davis, California City of Davis

✓ TIME LAPSE:

- Population 62,000.
- 50 miles of bike lanes and 50 miles of bike paths.
- It is typically used for 24-, 48-, 72 hrs.
- The camera is mounted 8 to 10 feet off the ground on an existing pole.
- Use GPS to inventory entire bicycle and pedestrian system.
- Data are compiled from the videotape by technicians or interns.
[13].
Recognition Patterns (Bicycle, Wheelchair, Dog walkers)

Building a separate storage.

Time Lapse Video

Already have Cloud and Memory storage devices.

GPS (traffic point controller)
References

[1]. [2],[3], [4], [5], [6], <div>Icons made by <a href="https://www.flaticon.com/authors/vectors-market" title="Vectors Market">Vectors Market</a> from <a href="https://www.flaticon.com/" title="Flaticon">www.flaticon.com</a> is licensed by <a href="http://creativecommons.org/licenses/by/3.0/" title="Creative Commons BY 3.0" target="_blank">CC 3.0 BY</a></div>

[7]. Pg 2-55 http://www.greensboro-nc.gov/Home/ShowDocument?id=28300

[12]. https://opengameart.org/content/surveillance-camera

[14]. Image taken from Abhinaw Priyadershi Presentation BMW Group dialouges

“The goal is to turn data into information, and information into insight.”

– Carly Fiorina