Vehicle Miles Traveled and SB 743 - Training

May 12, 2020

Nancy Adams, Transportation Planner
Rob Sprinkle, Deputy Director Traffic
Chris Barney, Senior Planner SCTA1
Introduction/Background

City Process To Date

• 2015-Present Collaboration with SCTA (TPW, SCTA)
  – OPR
  – VMT Training
• 2019- Present Internal City Team (TPW, PED, CAO)
• 2019-Present TPW Developing Draft VMT Documents, Schedule
Vehicle Miles Traveled and Senate Bill 743
Senate Bill 743 – What is it?

- Changes how transportation impacts are considered in California Environmental Quality Act (CEQA)
- Requires that LOS (congestion) is no longer used to estimate transportation impacts in CEQA
- Governor’s Office of Planning and Research in charge of drafting guidelines
- VMT determined most appropriate metric for transportation
What is Vehicle Miles Traveled (VMT)?

- Measures the amount of vehicular travel across the system, rather than at specific points, usually expressed per person
- Measure of total travel and activity not congestion
- Captures big picture or regional impacts of travel

VMT is not directly measured or observed
- Estimated from traffic counts, using traffic models, or other derived data sources and methods
What is Level of Service?

- Measure of delay or congestion
- Usually expressed in seconds of delay per vehicle at an intersection or along a segment
- Detailed estimate of local traffic conditions at a specific area
VMT Data Sources

- **VMT is not directly measured or observed**
- Estimated from traffic counts, using traffic models, or other derived data sources
- Highway Performance Monitoring System (HPMS) is a Caltrans VMT product
- Big Data (Mobile Source – Data Mining)
- Sketch/Spreadsheet tools use constants to estimate VMT
Network VMT:

Traffic Volumes x Road Length

Data Sources:

• Travel Models
• HPMS
• Traffic counts and road data
Origin & Destination VMT:

Vehicle Trips x Avg. Trip Length

Data Sources:

- Travel Models
- Mobile Source/Big Data
- VMT calculators
VMT Estimation

• VMT can be calculated for different trip types
  • Home based work or **commute** trips
  • Home based other or all other **trips starting and ending at home**
  • Non-home based or trips starting and ending at a non-home location (chained trips, lunch to/from work, etc.)

• Different types of VMT may be required for different project types
  • Residential Projects – All home based trips
  • Office Projects – home based work or **commute** trips only
  • Retail – total VMT
• Using “Big Data”
• Archival location data from mobile devices
• Provides true origin-destination data passively and anonymously
Travel Behavior Study Deliverables

• Detailed report covering travel flows, origins and destinations, estimates of visitor travel, etc.  

• Maps, charts, and graphics

• Raw data

• Travel model enhancements: (weekends, winery/ag travel, visitor travel, out of county travel)
Trip Types
Average Weekday in Spring 2017

- **Trips into Sonoma County**: 4.8%
- **Trips out of Sonoma County**: 4.8%
- **Trips within Sonoma County**: 89%
- **Trips passing through Sonoma County**: 1.5%

1,648,000 trips total
1,464,000 trips within Sonoma County
80,000 trips out of Sonoma County
80,000 trips into Sonoma County
25,000 trips passing through Sonoma County
# Trip Length Distribution

By jurisdiction, in Miles

## 60% of trips less than 5 miles

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Average Trip Length</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloverdale</td>
<td>8.7</td>
<td>0-1: 18%, 1-2: 23%, 2-5: 30%, 5-10: 5%, 10-20: 6%, 20-30: 5%, 30-40: 7%, &gt;40: 6%</td>
</tr>
<tr>
<td>Santa Rosa</td>
<td>5.4</td>
<td>0-1: 9%, 1-2: 17%, 2-5: 35%, 5-10: 24%, 10-20: 11%, 20-30: 2%, 30-40: 1%, &gt;40: 1%</td>
</tr>
<tr>
<td>Rohnert Park</td>
<td>6.9</td>
<td>0-1: 10%, 1-2: 20%, 2-5: 29%, 5-10: 20%, 10-20: 16%, 20-30: 2%, 30-40: 1%, &gt;40: 1%</td>
</tr>
</tbody>
</table>
Average Trip Length
By Jurisdiction, in Miles

- 8.7 miles: Cloverdale
- 8.1 miles: Healdsburg
- 7.3 miles: Windsor
- 7.0 miles: Sebastopol
- 5.4 miles: Santa Rosa
- 6.9 miles: Rohnert Park
- 6.8 miles: Cotati
- 6.7 miles: Petaluma
- 4.2 miles: Sonoma
- 10.1 miles: Other
## Origin-Destination Patterns
### Weekdays, by Jurisdiction

<table>
<thead>
<tr>
<th></th>
<th>Cloverdale</th>
<th>Healdsburg</th>
<th>Windsor</th>
<th>Sebastopol</th>
<th>Santa Rosa</th>
<th>Rohnert Park</th>
<th>Cotati</th>
<th>Petaluma</th>
<th>Sonoma</th>
<th>Other</th>
<th>Gateway</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloverdale</td>
<td>14,000</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>2,000</td>
<td>1,000</td>
<td>1,000</td>
<td>2,000</td>
<td>1,000</td>
<td>20,000</td>
<td>20,000</td>
<td></td>
</tr>
<tr>
<td>Healdsburg</td>
<td>1,000</td>
<td>20,000</td>
<td>3,000</td>
<td>5,000</td>
<td>2,000</td>
<td>1,000</td>
<td>1,000</td>
<td>2,000</td>
<td>1,000</td>
<td>35,000</td>
<td>35,000</td>
<td></td>
</tr>
<tr>
<td>Windsor</td>
<td>1,000</td>
<td>4,000</td>
<td>40,000</td>
<td>18,000</td>
<td>2,000</td>
<td>1,000</td>
<td>1,000</td>
<td>10,000</td>
<td>2,000</td>
<td>79,000</td>
<td>79,000</td>
<td></td>
</tr>
<tr>
<td>Sebastopol</td>
<td>1,000</td>
<td>6,000</td>
<td>19,000</td>
<td>9,000</td>
<td>517,000</td>
<td>37,000</td>
<td>4,000</td>
<td>14,000</td>
<td>2,000</td>
<td>676,000</td>
<td>676,000</td>
<td></td>
</tr>
<tr>
<td>Santa Rosa</td>
<td>1,000</td>
<td>6,000</td>
<td>19,000</td>
<td>9,000</td>
<td>517,000</td>
<td>37,000</td>
<td>4,000</td>
<td>14,000</td>
<td>2,000</td>
<td>676,000</td>
<td>676,000</td>
<td></td>
</tr>
<tr>
<td>Rohnert Park</td>
<td>2,000</td>
<td>2,000</td>
<td>36,000</td>
<td>95,000</td>
<td>12,000</td>
<td>14,000</td>
<td>12,000</td>
<td>12,000</td>
<td>186,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cotati</td>
<td></td>
<td></td>
<td></td>
<td>3,000</td>
<td>2,000</td>
<td>18,000</td>
<td>12,000</td>
<td>2,000</td>
<td>2,000</td>
<td>26,000</td>
<td>26,000</td>
<td></td>
</tr>
<tr>
<td>Petaluma</td>
<td>1,000</td>
<td>1,000</td>
<td>15,000</td>
<td>15,000</td>
<td>3,000</td>
<td>158,000</td>
<td>1,000</td>
<td>15,000</td>
<td>19,000</td>
<td>228,000</td>
<td>228,000</td>
<td></td>
</tr>
<tr>
<td>Sonoma</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2,000</td>
<td>1,000</td>
<td>39,000</td>
<td>15,000</td>
<td>8,000</td>
<td>66,000</td>
<td>66,000</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2,000</td>
<td>5,000</td>
<td>11,000</td>
<td>6,000</td>
<td>50,000</td>
<td>11,000</td>
<td>2,000</td>
<td>14,000</td>
<td>15,000</td>
<td>201,000</td>
<td>201,000</td>
<td></td>
</tr>
<tr>
<td>Gateway</td>
<td>1,000</td>
<td>1,000</td>
<td>2,000</td>
<td>2,000</td>
<td>20,000</td>
<td>12,000</td>
<td>1,000</td>
<td>19,000</td>
<td>7,000</td>
<td>104,000</td>
<td>104,000</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20,000</td>
<td>36,000</td>
<td>79,000</td>
<td>26,000</td>
<td>677,000</td>
<td>187,000</td>
<td>26,000</td>
<td>226,000</td>
<td>65,000</td>
<td>199,000</td>
<td>199,000</td>
<td>1,648,000</td>
</tr>
</tbody>
</table>
SCTASB 743 Support

- **VMT Screening Maps** – high and low VMT areas
- VMT Data and Estimates
- White paper on SB 743 Implementation
- VMT Implementation Workshop
- Travel Behavior Study is another source for VMT estimates, origin and destination data, information on average trip lengths, etc.
- Project level VMT analysis
LAND USE PROJECTS

- Residential -
  - Caritas, Burbank Ave Subdivision, Journey’s End, Creekside Townhomes, Middle Rincon Crossings, Elnoka, One Calistoga

- Office –
  - Kaiser MOB, VAClinic

- Retail –
  - In ‘n Out
LAND USE PROJECTS

• Cannabis –
  – Santa Rosa Farms

• HOTEL –
  – AC Marriott
Potential Measures to Reduce VMT

- Incorporate affordable housing
- Incorporate neighborhood electric vehicle program
- Increase access to common goods and services, such as groceries, schools, etc.
- Improve pedestrian or bicycle networks, or transit service
- Provide bicycle parking
- Provide traffic calming
- Limit or eliminate parking
- Unbundle parking costs
- Provide car sharing, bike sharing, and ride-sharing programs
- Provide on-site amenities at places of work, such as showers, locker rooms etc.
ROLES AND RESPONSIBILITIES

CITY–

• TPW– responsible for VMT guidelines, review and approve VMT methodology
• PED– Coordinate with TPW, provide applicants with VMT info
• CAO – support PED and TPW (VMT mitigation and CEQA compliance)
ROLES AND RESPONSIBILITIES

• CONSULTANTS – prepare VMT analysis for applicants consistent with City’s guidelines
• SCTA – provide TPW support
NEXT STEPS

• May 22, 2020 – VMT webpage launched
• May 29, 2020 - Finalize Draft Guidelines/Documents
• June 12, 2020 – Memo to City Council
• June 19, 2020 – Memo to Planning Commission Design Review Board
• July 1, 2020 – VMT required per OPR
• October 1, 2020 – VMT Process Review (How’s it working)
QUESTIONS?

THANK YOU!