GreenTRIP Connect

• Mores homes and less traffic
• SB743 compliance
• General Plan Updates
• PDAs and TODs

Southern California Association of Governments Modeling Task Force
January 24, 2024

Ann Cheng Consulting

www.annchengconsulting.com
ann@annchengconsulting.com
707-385-9774
Mayfair at Del Norte BART

El Cerrito

Green TRIP CERTIFIED
In Unit Bicycle Parking Hooks
FREE AC Transit Transbay Bus 2 / unit; 40 years
FREE GetAround membership to 4-6 Shared Cars
$10 Bikelink Card for Every Resident
Bicycle Fixing Station
Walk/Bike/Transit Travel Info Touch Screen
Pedestrian Trunk in Every Unit

4 types of bike parking
154: in unit
24: guest secured
34: basement
8: on street

34 units to 56 units
50% less transportation costs
$27+ million private investment in public transit

7,000+ units
50+ projects
GreenTRIP Adopted

- City of Emeryville
- City of Richmond
- City of Sunnyvale
- City of Belmont
- City of Berkeley
- City of Oakland
- City of Pittsburg
- BART & VTA -- TOD policy
- CA Office of Planning and Research – 2020 General Plan Guidelines
Unused parking spaces: 28%
$198 million
1.2 million s.f.

GreenTRIP Parking Database

http://Database.GreenTRIP.org
Table 1. VMT mitigation measures summarized. Note that this list is not exhaustive, and other measures that satisfy CEQA requirements could be developed.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Ease of implementation</th>
<th>Efficacy</th>
<th>On- or Off-System</th>
<th>Key considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active transportation</td>
<td>High</td>
<td>Low⁶</td>
<td>Both (Note: for the SHS, may be most effective when integrated with conventional “main-street” highways)</td>
<td>Must provide access to destinations, not simply recreational opportunities.</td>
</tr>
<tr>
<td>Land use – residential</td>
<td>Low</td>
<td>High</td>
<td>Off</td>
<td>Requires partnership agreements with land use jurisdictions housing authorities, and private developers. VMT benefits come from density, affordability and location.</td>
</tr>
<tr>
<td>Land use – employment</td>
<td>Low</td>
<td>High</td>
<td>Off</td>
<td>Requires partnership agreements with land use jurisdictions housing authorities, and private developers. VMT benefits come from density and location.</td>
</tr>
<tr>
<td>TDM</td>
<td>High</td>
<td>Medium</td>
<td>Off</td>
<td>Services can be tailored to meet specific user needs. Must be supported with long term maintenance of effort.</td>
</tr>
<tr>
<td>Transit service improvement</td>
<td>Low to high</td>
<td>Low to high</td>
<td>Both</td>
<td>Usually requires partnership agreements with transit operators.</td>
</tr>
<tr>
<td>Local road networks/ connectivity</td>
<td>Low to high</td>
<td>Low to high</td>
<td>Off</td>
<td>Can relieve pressures on SHS and provide more direct, multimodal access to destinations.</td>
</tr>
<tr>
<td>Micro-mobility</td>
<td>High</td>
<td>Low</td>
<td>Both</td>
<td>Requires partnership agreements with transit operators and/or transportation network companies.</td>
</tr>
<tr>
<td>Telecommuting</td>
<td>High</td>
<td>Minimal</td>
<td>NA</td>
<td>Telecommuting tends to shift trip-making, but not reduce VMT. Any claim here would need careful, specific support.</td>
</tr>
<tr>
<td>Schedule-shifting</td>
<td>NA</td>
<td>None</td>
<td>NA</td>
<td>Reschedules rather than reduces trips. Likely increases VMT.</td>
</tr>
<tr>
<td>Road diets</td>
<td>High</td>
<td>High</td>
<td>Both</td>
<td>Lane removals can be considered roughly equivalent to lane additions for similar facilities.</td>
</tr>
<tr>
<td>Pricing</td>
<td>Low to high</td>
<td>High</td>
<td>Both</td>
<td>Operational details and market analysis needed during PA&amp;ED.</td>
</tr>
<tr>
<td>Lane management</td>
<td>Low to high</td>
<td>Low</td>
<td>Off</td>
<td>VMT effect depends on specific management strategy such as transit/HOV priority.</td>
</tr>
<tr>
<td>Parking pricing/ restrictions</td>
<td>High</td>
<td>High</td>
<td>Off (On in some limited cases)</td>
<td>Potentially powerful tool for specific land uses in a highway corridor.</td>
</tr>
<tr>
<td>Park and ride lots</td>
<td>High</td>
<td>Low</td>
<td>Both</td>
<td>Removes commute trips. Effect on total VMT needs to be addressed in mitigation plan.</td>
</tr>
<tr>
<td>Land preservation</td>
<td>High</td>
<td>Unclear</td>
<td>Off</td>
<td>Could work in theory but measurement is difficult. May be best combined with transfer of development rights to spur infill TOD.</td>
</tr>
</tbody>
</table>

⁶ This is not to imply that Active Transportation projects are not a high priority for Caltrans and worth doing for their own sake. While Active Transportation projects do have a downward VMT effect, the amount of VMT that can be reduced by these projects is often much smaller than the VMT induced by highway projects. This scale is important to consider when developing mitigations.
Welcome to GreenTRIP Connect. Connect helps you instantly calculate how smart location, affordable homes and traffic reduction strategies can reduce driving and greenhouse gas emissions from residential development. It also calculates how much money and space can be saved from right-sized parking.

Get Started Using GreenTRIP Connect

city of norwalk
GO

For residential developments in California

Why GreenTRIP Connect?

Nuria Fernandez
General Manager/CEO
Santa Clara Valley Transportation Authority
Step 2: Pick a parcel

Select a parcel, draw to select, or clear parcel.

Step 3: Tell us about the project

Enter details on your proposed residential project, or create a hypothetical one, to explore how a variety of project characteristics change the amount of driving, greenhouse gas emissions and parking.

Start by selecting one or more parcels on the map above.
### Built in Comparisons for SB743 Implementation

#### GreenTRIP Connect dashboard for your project

**Project characteristics**
- Building: 200 units (default)
- Parking proposed: 100 spaces (default)
- Density: 54.08 units/acre
- Parking ratio: 0.50 spaces/unit

**GreenTRIP Certification ready?**

#### Comparison snapshot
- **Driving**
  - miles/day
  - Greenhouse gases
    - kg CO₂/day
  - Parking spaces
    - predicted use

**if built in an average location in the City**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Driving</th>
<th>Greenhouse gases</th>
<th>Parking spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norwalk City</td>
<td>32.44</td>
<td>18.49</td>
<td>n/a</td>
</tr>
<tr>
<td>if built on selected parcel</td>
<td>23.3</td>
<td>13.28</td>
<td>n/a</td>
</tr>
<tr>
<td>with affordable housing</td>
<td>20.93</td>
<td>11.93</td>
<td>n/a</td>
</tr>
<tr>
<td>with GreenTRIP strategies</td>
<td>13.04</td>
<td>7.44</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Your project</strong></td>
<td><strong>13.04</strong></td>
<td><strong>7.44</strong></td>
<td><strong>n/a</strong></td>
</tr>
</tbody>
</table>

#### Resident savings from selected GreenTRIP strategies per year/household
- Saved on parking compared to municipal parking requirement of 2.2 spaces/unit, or 440 spaces total.

- **$1,048**
- **$17,000,000**

#### Total driving and climate impact compared to Norwalk City average.
- **60%** Less driving
- **19.4** Fewer miles per day
- **60%** Less climate impact
- **11.06** Fewer kg of CO₂ per day
- **n/a** parking used
- **n/a** parking spaces used

---

**Share dashboard**
**View project report**
**Apply for certification**

See inspiring examples of
**GreenTRIP Certified projects**
GreenTRIP Connect dashboard for your project

Project characteristics
- Building: 200 units (default)
- Parking proposed: 100 spaces (default)
- Density: 54.08 units/acre
- Parking ratio: 0.50 spaces/unit

GreenTRIP Certification ready?

Get started

See requirements

[+] Click to hide details

Toggle Outputs

<table>
<thead>
<tr>
<th>Comparison snapshot</th>
<th>Driving miles/day</th>
<th>Greenhouse gases kg CO₂/day</th>
<th>Parking spaces predicted use</th>
</tr>
</thead>
<tbody>
<tr>
<td>if built in an average location in the City</td>
<td>32.44</td>
<td>18.49</td>
<td>n/a</td>
</tr>
<tr>
<td>if built on selected parcel</td>
<td>23.3</td>
<td>13.28</td>
<td>n/a</td>
</tr>
<tr>
<td>with affordable housing</td>
<td>22.83</td>
<td>13.01</td>
<td>n/a</td>
</tr>
<tr>
<td>with GreenTRIP strategies</td>
<td>18.26</td>
<td>10.41</td>
<td>n/a</td>
</tr>
<tr>
<td>Your project</td>
<td>18.26</td>
<td>10.41</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Resident savings from selected GreenTRIP strategies per year/household

- $0
- Saved on parking compared to municipal parking requirement of 1.5 spaces/unit, or 300 spaces total.

Total driving and climate impact compared to Norwalk City average.

- 44% Less driving
- 14.18 Fewer miles per day
- 44% Less climate impact
- 8.08 Fewer kg of CO₂ per day

Savings!

updated outputs highlighted in yellow
Below is a custom GreenTRIP Connect project report that you can share, save, print and edit. Add project information to customize the Connect project report.

Project name / address
Connect Demo for SCAG Modeling Task Force
Prepared by
Ann Cheng Consulting, LLC

Project status
Exploratory

Additional project info
This information will appear below the GreenTRIP dashboard in your project report.
This is an example of VMT analysis report that could be used by local developers and planning staff to determine how a project meets VMT screening requirements.

Shareable permalink

4-page Connect Report for TDM related VMT analysis

GreenTRIP Connect (Connect.Greentrip.org) is a free, online tool that models traffic and greenhouse gas impacts of a residential project in California. Based on the project’s location, unit count, unit mix, rent, parking supply, and traffic reduction strategies, this project will result in:

- 2,835 fewer miles driven every day compared to the Norwalk City average.
- 44% fewer GHG impacts every day compared to the Norwalk City average.
- $0 in transportation savings for future residents.

Parking when compared to Municipal requirements:

- Saving $10,000,000 in parking construction cost if built with 0.50 instead of the municipal requirement of 1.5 spaces/unit.
- Saving 28,200 sq.ft. in parking spaces which could be allocated to 38 housing units of 751 sq.ft.
GreenTRIP Connect Uses

• Share and watch the video. FREE Tech Tools

• Use Connect and database in community meetings, workshops and webinars on SB743 Implementation or TDM analysis

• Recorded Connect training webinars