777 West Middlefield Road Transportation Demand Management Plan

June 2018

NELSON NYGAARD

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1 INTRODUCTION

The development context and overall design profile of 777 West Middlefield Road make it a prime candidate for robust and effective transportation demand management (TDM). This TDM Plan describes measures that will enable the site to actively manage travel demand through a variety of up-front infrastructure investments and ongoing programs, including unbundled parking, multimodal infrastructure improvements, vehicle share facilities and memberships, and others.

TDM refers to policies, physical amenities, programs, tools, and services that support the use of sustainable modes to facilitate non-driving access to an area. TDM is intended to work with the existing transportation system to expand and support mobility options that accommodate growth while meeting City of Mountain View goals.

PROJECT CONTEXT AND PROFILE

Based on the site plan dated April 25, 2018, Fort Bay LLC proposes replacing 208 existing apartment units at 777 West Middlefield Road with 716 units, providing much needed housing in the City of Mountain View while remaining in character with the surrounding neighborhood design. The proposed project is located on the west side of Middlefield Road between Shoreline Boulevard and Moffett Boulevard. The project will consist of 716 units distributed in three individual buildings and served by a single subterranean garage of 847 parking spaces. The housing development will include both market rate and below market rate units.

The City of Mountain View encourages a percentage of new housing to be affordable. Key strategies to achieve this include: (1) Incentivizing land donations for affordable housing development, (2) including affordable housing units within market-rate developments; and (3) collecting rental housing impact fees from market-rate housing developments. Under the City's Below-Market-Rate (BMR) Program, *10% of all new housing must be set aside for low and moderate persons.*[1] 777 West Middlefield exceeds this requirement with more than 20% of its units set aside for below-market rate residents.

777 West Middlefield is approximately 0.7 miles from the Mountain View Caltrain station, and is currently served by VTA Route 32 along West Middlefield Road as well as the MVGo free shuttle along Shoreline Boulevard, providing direct transit connections to Caltrain and major employment and retail centers in the area. Both West Middlefield Road and Shoreline Boulevard contain Class II bicycle lanes, providing a dedicated bicycling connection to the Stevens Creek Trail.

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[1] City of Mountain View (1999). Below-Market-Rate Housing Program. Retrieved from http://www.mountainview.gov/civicax/filebank/blobdload.aspx?blobid=10763

WHY TRANSPORTATION DEMAND MANAGEMENT

This TDM Plan affirms Fort Bay's commitment to sustainability and accessibility and reinforces the City of Mountain View's policies to reduce greenhouse gas emissions and balance the needs of all transportation modes.[2] A robust TDM Plan enables the development to support these goals while also supporting the type of environments currently sought by prospective residents. Given the project's proposed TDM program, the increased amount of affordable housing, and surrounding transportation context, the project applicant proposes a parking ratio below City parking requirements, with an average site-wide parking ratio of 1.1 spaces per unit. In addition, the project applicant may use mechanical parking stackers to limit the parking footprint while still remaining responsive to parking demand as needed.

The strategies described in this Plan are designed to work together to shape residents' and visitors' travel habits. Targeted programs strengthen the benefits of investments in bicycle and pedestrian infrastructure and the site's transit connections by reinforcing awareness of these options, breaking down barriers to incorporating them in travel routines, and incentivizing habitual use. With this larger design context in mind, we estimate that estimates that full implementation of the TDM program included in the Strategy could produce an estimated **6% reduction in SOV trips**.

TDM PLAN OVERVIEW

This introduction is followed by two chapters:

- Chapter 2 presents a slate of recommended TDM measures for *777* West Middlefield Road to reduce SOV trip and parking demand for the development.
- Chapter 3 presents the project applicant's approach to monitoring the TDM Plan's implementation to ensure that it achieves its goals of reducing SOV trips and parking demand.

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[2] City of Mountain View (2012) *General Plan.* Retrieved from
http://www.mountainview.gov/civicax/filebank/blobdload.aspx?blobid=10702

2 PLANNED TDM STRATEGIES

This TDM Plan consists of a package of measures that will work together to effect behavioral change in a way that is both cost effective and highly marketable. Measures include incentives, programs, and infrastructure improvements, many of which have been successfully implemented in other suburban residential developments; those Implementation Practices are cited as possible below each measure.

The TDM measures discussed below are grouped into two categories: infrastructural measures and operational measures. Infrastructural measures typically involve one-time capital expenditures for the construction of a particular facility or amenity, or the allocation of space needed to accommodate the facility/amenity. Operational measures typically consist of ongoing costs to maintain existing facilities/amenities or sustain ongoing policy commitments.

The table below summarizes the TDM measures to be proposed for 777 West Middlefield.

Figure 1   Summary of TDM Strategies for 777 West Middlefield Road

Measure Type	Mode	TDM Strategy
Infrastructural	Building	Affordable housing
	Motorized Transport	Car share
	Bicycle	Bicycle parking
	Bicycle	Bicycle repair station
	Transit	Shuttle stop improvements
	Bicycle/Pedestrian	Improved walking and bicycling conditions through the site
	Building	Convenient delivery storage area
	Transit	Real-time transit information
	Building	Collaborative workspace
Operational	Parking	Unbundled parking
	Transit/Motorized Transport	Transit/ride-hail subsidies
	Transit/Bicycle/Pedestrian	Sustainable transportation incentives
	Building	TMA membership
	Building	TDM coordinator

INFRASTRUCTURAL STRATEGIES

Affordable Housing

777 West Middlefield will include 144 affordable units, more than 20% of its overall units. A residential development's housing type also affects its ability to reduce vehicle trips. Projects that incorporate affordable housing usually have lower parking demand and vehicle trip generation rates.[3] This typically occurs because there is a lower auto ownership rate among residents in lower-income/affordable units. Moreover, there is a high need for housing in general and below market-rate units specifically in the South Bay, with a median house value of $1.5 million in the City of Mountain View.[4] Providing more than 20% of its units at below market rate will help reduce the need for parking.

On-Site Car Share Spaces

777 West Middlefield will provide at least four parking spaces at no cost to car share operators, with the possibility of increasing up to eight spaces over time in response to demand. Car share facilities act as both a transportation solution and an attractive building amenity. Programs allow for 24/7 on-demand access to a shared fleet of vehicles. Providing access to car share helps offset a smaller parking supply by supplying residents with access to a vehicle without having to purchase one.

While the City of Mountain View does not require car share spaces in its citywide zoning code that covers 777 West Middlefield, comparable South Bay developments typically provide at least two to three on-site car share spaces to reduce resident parking demand. In Mountain View's North Bayshore Precise Plan area, multi-family developments of more than 200 units are required to allocate two car share spaces, plus one for every additional 200 units.[5] This same requirement also exists for developments of more than 200 units throughout the city of San Francisco, and this rate of car share space allocation is equivalent to a 1% reduction "credit" that counts towards the project's mandatory vehicle miles traveled (VMT) reduction threshold.[6] To earn a higher number of credits towards the VMT reduction threshold, projects with more than 200 units can provide more substantial car-share incentives, including increasing the number of car share spaces up to one space per every 40 units, and car share membership for each household.[7]

The project applicant will confirm there is sufficient demand and interest before purchasing subsidized car share memberships for its project households.

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[3] TransForm, GreenTRIP Parking Database http://database.greentrip.org/ Assembly Bill 744, which was approved on October 9, 2015, recognizes the lower parking demand and VMT associated with affordable housing developments. http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB744.

[4] "Mountain View, CA Housing Market, Trends, and Schools - Realtor.com®." 2018. May 31, 2018. https://www.realtor.com/local/Mountain-View_CA.

[5] City of Mountain View. 2017. North Bayshore Precise Plan. Table 24: Ridesharing Vehicle Parking Requirements. https://www.mountainview.gov/civicax/filebank/blobdload.aspx?BlobID=15050

[6] Each project must achieve a trip reduction target based on its location, off-street parking ratio, access to transit, density, and other factors.

[7] City of San Francisco. 2017. TDM Program Standards: Appendix A. http://default.sfplanning.org/plans-and-programs/emerging_issues/tsp/TDM_Measures_02-17-2017.pdf

A UC Berkeley study found that each car-sharing vehicle takes between 9 and 13 private cars off the road, including member vehicles sold and postponed vehicle purchases.[8] In other words, a typical household with a car share membership reduces its vehicle ownership, on average, by between 0.24 and 0.47 vehicles. By reducing car ownership, car sharing typically reduces the number of vehicle trips.[9] Spaces will be located in high-visibility parking spots within the parking garage, with clear exterior signage to increase visibility and emphasize the convenience of car share.

Implementation Practices

Madera Apartments (Mountain View) has 203 units with a 1.37 parking ratio and provides two car share vehicles on site, with two additional Zipcar locations within ¼ mile. The mixed-use development at 400 San Antonio Road is slated to provide two to three Zipcar vehicles on-site.[10] The Uptown (Oakland) has 665 units with a 0.80 parking ratio and provides one car share vehicle on site, with an additional four car share locations within a 1/4 mile. Fox Plaza (San Francisco) has 443 units with a 0.77 parking ratio and provides 14 car share vehicles on site, with 12 additional spaces located within 1/4 mile.

Secure Bicycle Parking

In line with City requirements, the project applicant will provide 716 secure (Class I) bicycle parking spaces for residents across the three buildings, in addition to 72 public short-term (Class II) bicycle parking spaces. Residents are more likely to bike when offered the same level of access and security as motorists. Secure bicycle parking is an important feature for new residential developments that helps encourage bike trips shorter errands and first- and last-mile connections.

The City of Mountain View requires the following bike parking standards:

- One bicycle parking space is required for each unit.
- Ten percent of all bicycle parking provided must be allocated for guest use.

The secure spaces will be located at easily accessible, well-lit, and attractive locations close to main entrances within buildings. The project applicant will provide a fob, a key, or another secure access mechanism to residents. Bike parking will be designed to also accommodate cargo bicycles. Public short-term bike parking is often considered secure when it is situated in well-lit, highly visible areas.

Bicycle Repair Station

Bike repair stations provide convenient bike tools to make it easier for bicyclists to keep their bikes operable. A bike repair station also addresses concerns about ongoing bicycle maintenance– by providing accessible tools and parts in an easily accessible and secure area.

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[8] Martin, Elliot, Susan Shaheen, and Jeffrey Lidicker. 2010. "Impact of Carsharing on Household Vehicle Holdings." *Transportation Research Record* 2143: 150–58. doi:10.3141/2143-19.

[9] TransForm, GreenTRIP Traffic Reduction Strategies – Free Car share Membership, GreenTrip Connect Car Share Factsheet.

[10] Hexagon Transportation Consultants. 2016, August 2. Transportation Demand Management Plan, Mixed-Use Development at 400 San Antonio Road in Mountain View, CA.

The project applicant will set aside adequate space for installing at least one bike repair station on site. This space should be adequate for a bike stand and necessary tools and supplies. Tools and supplies should include, at a minimum, those necessary for fixing a flat tire, adjusting a chain, and performing other basic bicycle maintenance. This may include a bicycle pump, wrenches, a chain tool, lubricants, tire levers, hex keys/Allen wrenches, screwdrivers, and spoke wrenches.

Figure 2   Bicycle Repair Station

Implementation Practices

As an example, at NEMA in San Francisco, residents have access to bike rentals, storage, and a repair/resource center. The Velo Room at Solera (Denver) provides tools, bike stands, work benches, air pumps, tubes, and other supplies, as well as gel packs, energy bars, and bike trail maps. Several university campuses, including Ponce Health Science University in Portland and the University of California-Davis, have bicycle repair stations in key facilities.

Shuttle Stop Improvements

The project applicant will coordinate with the City of Mountain View and the Mountain View Transportation Management Association (MVMTA) to provide transit stop improvements on Shoreline Road adjacent to 777 West Middlefield. Waiting for the bus is a significant part of nearly every transit trip. Well-designed bus stops enhance the transit experience, decrease perceived wait times for transit services, and can contribute to increased ridership. Conversely, poorly designed bus stops can decrease customer satisfaction, make transit less attractive to potential new customers, and make waiting at stops unsafe for riders. Investing in high quality bus stops is often a low-cost, high-reward strategy for developers and property managers seeking to reduce on-site parking demand.

The 777 West Middlefield property borders Shoreline Road, which is the primary service corridor of the MVgo shuttle service's East and West Bayshore routes, operated by the Mountain View Transportation Management Association (MVMTA). However, the MVgo shuttle's closest stop is at Shoreline/Terra Bella, about 1/3 mile north of 777 West Middlefield. Ensuring that the MVgo shuttle directly serves 777 West Middlefield is critical to reducing the walking time needed to access the shuttle and encourage significant numbers of residents to ride transit.

Additionally, the applicant will consider collaborating with Santa Clara Valley Transit Authority (VTA) to promote residents' use of the VTA system. VTA operates Route 32 between San Antonio Road and Santa Clara Transit Center, with eastbound and westbound stops on Middlefield Road on 777 West Middlefield's eastern boundary. Currently, amenities at these stops are rudimentary, consisting only of bus stop signage and bench seating.

Implementation Practices

It is likely that given the land use context, both the shuttle and Route 32 stops nearest 777 West Middlefield will attract moderate ridership. Best practices for transit stop amenities at stops with moderate passenger volumes typically include the following:

- Bus stop signage
- Schedule information to reduce some of the uncertainty associated with taking a bus
- Paved waiting area to conform to accessibility requirements set forth in the Americans with Disabilities Act (ADA)
- Seating to enhance the experience of waiting for a bus
- Shelters to protect transit riders from the elements and help to identify stop locations, overall enhancing public perceptions of transit and function as advertisements for available services
- Lighting to make passengers feel more safe and comfortable while waiting

Improved Walking and Bicycling Conditions

As described in the 777 West Middlefield Road planning documents, the development will improve walking and bicycling conditions throughout and surrounding the site, including:

- A publicly-accessible Class I bicycle lane through the site connecting Middlefield Road and Shoreline Boulevard
- A signalized intersection at the southeast end of the site on Middlefield Road
- Frontage along Middlefield Road for the City to improve sidewalk facilities

Currently, the 777 West Middlefield site is bounded by very long block distances and adjacent to several multi-lanes roads that can create an unpleasant walking environment. The new streets in this area of Mountain View will greatly improve the overall walking conditions of the neighborhood and facilitate safer and more convenient pedestrian connections. A pedestrian-oriented urban design is essential for residents and visitors to fully take advantage of the other TDM measures, supporting access to all of the available services, amenities, and transportation options throughout the site and nearby. These improvements help shape the environment for the other TDM measures to succeed.

Convenient Delivery Storage Space

The project applicant will provide storage space near the concierge and elevators to store packages, perishables, laundry, and other deliveries. Providing storage space for deliveries – such as groceries and online orders – can have a direct impact on reducing vehicle trips. Building residents typically access deliveries through a locker system with unique pick-up codes that include the locker number and access times for the delivery recipient when building staff are unable.

Implementation Practices

This strategy has been implemented at Parkmerced Apartments, a residential apartment complex in Parkmerced near San Francisco State University. Residents have access to Amazon Lockers to help facilitate online ordering. Residents can have their packages delivered to the lockers and are

then notified through the residential portal when their packages have arrived.[11] Madera Apartments in Mountain View also has a 24/7 package locker system.[12]

Real-Time Transit Information

The applicant will install up to three real-time transit information screens, to be displayed prominently in building lobbies. Knowing when the next bus arrives, in real-time, can help reduce some of the uncertainty associated with using alternative transportation modes and reduce the time residents spend waiting at bus stops. Access to real-time transit information, whether in fixed displays or via mobile apps, was found to increase bus ridership,[13] decrease time spent waiting at bus stops, and increase rider satisfaction.[14] These displays also typically include information for modes other than transit, such as the availability of nearby car share vehicles or ride hailing services.

Real-time transit information screens installed in lobbies or common areas show residents all of their available transportation options in a clear, user-friendly display, such as in Figure 4. Leading vendors such as TransitScreen and Roadify provide installation assistance as well as subscriptions to area transit information, with customizations available for local operators such as the MVgo Shuttle.

Implementation Practices

Parkmerced, the largest apartment community in San Francisco, began a partnership in 2014 with TransitScreen, a company that provides real-time transit information displays. TransitScreen is working with the Metropolitan Transportation Commission to modernize transit displays in over 46 locations throughout the San Francisco Bay Area. Another residential development, NEMA, provides real-time transit information on their resident app and website.

Collaborative Work Space

A business services room can help encourage and facilitate working from home, which can have a direct impact on reducing trips to and from the site. Such an amenity is a typical part of large

Figure 3   TransitScreen Display in Holm Apartments, Washington, D.C.

[11] Maximus Real Estate Partners. 2018. "Resident Services for B[...] 1, 2018. https://www.parkmerced.com/residents/.

[12] Prometheus Apartments. 2018. "Madera Apartments Amenities. Mountain View Apartments | Madera. 2018. https://prometheusapartments.com/san-francisco-bay-area-apartments/san-francisco-south-bay/madera.

[13] Brakewood, Candace, Gregory S. Macfarlane, and Kari Watkins. 2015. "The Impact of Real-Time Information on Bus Ridership in New York City." *Transportation Research Part C: Emerging Technologies* 53 (April): 59–75. https://doi.org/10.1016/j.trc.2015.01.021.

[14] Brakewood, Candace. 2014. "Evaluating the Impacts of Real-Time Transit Information in Tampa and Atlanta." Webcast, August 7. https://www.cutr.usf.edu/wp-content/uploads/2014/08/CUTR-Webcast-Handout-8.7.14.pdf.

rental buildings, though the size and specific services included vary.

At 777 West Middlefield , work spaces could include rentable work rooms that can be reserved in advance, equipped with video conferencing equipment, high-speed internet connections, projectors, white boards, basic office supplies, and printing, scanning, and faxing services. For residents interested in using this work space long term, dedicated mailboxes for businesses could be set aside and located nearby. **The project applicant and property management company will be responsible for developing and maintaining these business services rooms and ensuring that they are equipped with appropriate equipment.**

OPERATIONAL TDM STRATEGIES

Unbundled Parking

All parking spaces at 777 West Middlefield Road will be unbundled from the price of leasing or purchasing a residential unit. Unbundled parking means that the cost to lease a parking space at a residential development is separate from the cost of renting or purchasing a unit. Separating the cost of a parking space from the sale or lease of a housing unit saves money for households that do not wish to park a vehicle and reduces costs of development.

Unbundling parking costs changes parking from a required purchase to an optional amenity, so that households can freely choose how many spaces they wish to lease. This policy recognizes the cost of parking for a resident and helps him or her determine if it is a worthwhile expense, as opposed to it being incorporated into the overall price of renting or buying a home regardless of whether the resident owns a vehicle.

Implementation Practices

Applicants should agree on an appropriate market price for unbundled parking spaces, which is likely to fall in the range between $50 and $150 per month. Some local examples of multi-family projects that have successfully unbundled parking include Madera Apartments in Mountain View ($100/month), Waterford Place ($25/month) and Avalon at Cahill Park ($110/month) in San Jose, Via in Sunnyvale ($25 month), and Connolly Station in Dublin ($50/month).[15] The City of Mountain View's North Bayshore area also requires unbundling of all commercial and residential development.[16]

Transit/Ride-hail Subsidies

The project applicant will provide a monthly transit/ride-sharing stipend of $80/month per unit to be used on any combination of transit (e.g. Clipper Card, VTA Eco Pass), car share (e.g. Zipcar, Getaround) or ride-sharing platforms (e.g. Uber/Lyft).

Free or subsidized transit passes can increase residents' awareness of nearby transit options, and can reduce the financial barrier by making it a more cost-comparable option between the cost of public transportation and the cost of parking. Especially for residents of affordable units, this

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[15] Survey data from GreenTRIP database (http://www.transformca.org/greentrip/parking-database).

[16] City of Mountain View (2017). *Final Draft of North Bayshore Precise Plan.* Retrieved from https://www.mountainview.gov/civicax/filebank/blobdload.aspx?BlobID=25628

strategy can improve transit use, equity, mobility options, and further reduce the need for owning a car. Providing a flexible stipend rather than a specific transit pass maximizes residents' transportation options by providing residents' access to multiple services rather than just one.

This is a premium transportation amenity that is proven to be effective in stabilizing parking demand. At Maximus Partners' Parkmerced project, where this program has been available since 2016, tenant occupancy increased 9% during the first year of the program while parking demand remained stable.[17] Over 1,000 of Parkmerced's residents (about 11% of the project's total residents) are enrolled in this program.[18]

The efficacy of the stipend program to reduce vehicle trips and parking demand shall be measured and evaluated after one year. Refer to data collection plan

Sustainable Transportation Incentives

The project applicant will incentivize biking, walking, and using transit by providing a financial reward for using these modes. Sustainable transportation marketing services that focus on individual needs can support the reduction of vehicle trips and vehicle miles traveled and the use of transit and active transportation.[19] The resident portal may contain a platform where residents can log the number of times they travel using sustainable transportation (bike, walk, or transit), as shown in Figure 5. Residents that log the most trips (or a predetermined number) could qualify for a variety of benefits, such as bike vouchers and gift cards, or be entered into a raffle to win larger prizes. Ride Amigos and Luum are two leading providers of the integrated commute management software used to coordinate these sustainable transportation incentive programs.

As an example, Santa Monica College employees who log commuter trips at the SMC-specific trip planner, Corsair Commute, can earn $15 to $30 per month for using sustainable transportation (30% to 100% of all trips). Employees who qualify for three consecutive months in a given academic quarter are entered into a prize drawing for one of four $50 gift certificates.[20]

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[17] Galdes, Camille. 2017. "Ride-Hailing Becomes a CRE Amenity." NAIOP Commercial Real Estate Development Association. Fall 2017. https://www.naiop.org/Magazine/2017/Fall-2017/Business-Trends/Ride-hailing-Becomes-a-CRE-Amenity.

[18] https://www.maximusrepartners.com/parkmerced-partners-getaround-expands-car-free-living-program/

[19] California Air Pollution Control Officers Association (CAPCOA), Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures, August 2010.

[20] Santa Monica College. Retrieved from: http://www.smc.edu/StudentServices/transportation/Pages/STIP-FAQ.aspx.

Figure 4   Online Trip Logging Portal (Ride Amigos)
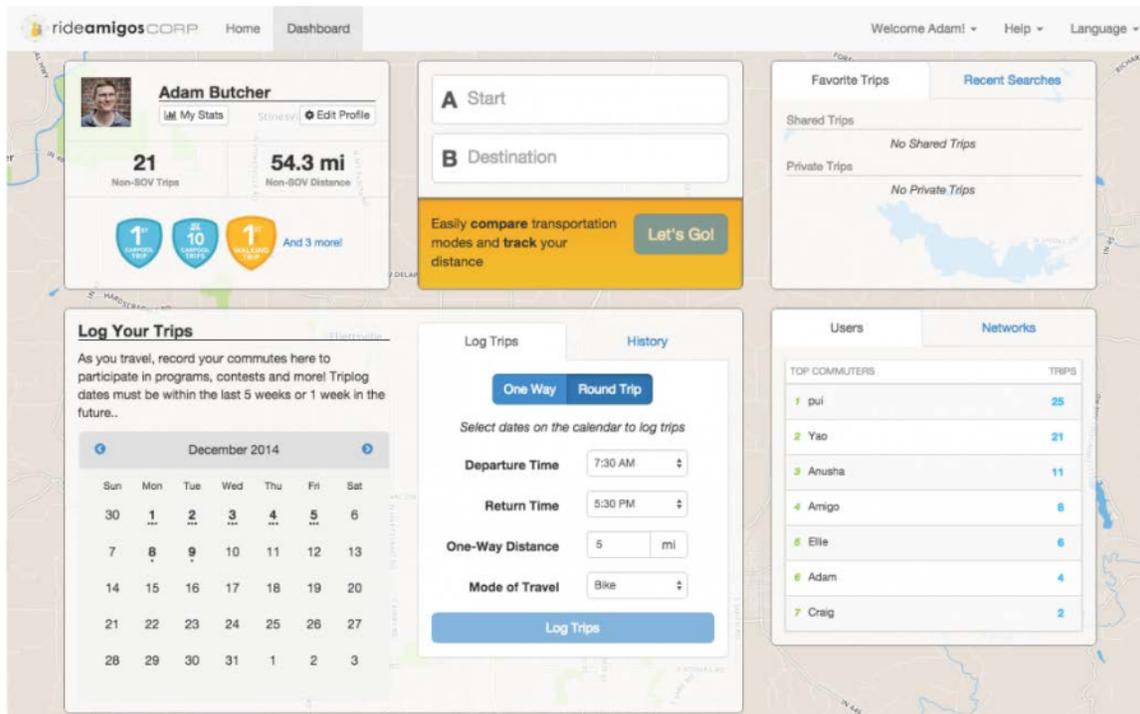
Source: Ride Amigos

TMA Membership

The project applicant will join the Mountain View Transportation Management Association (MVMTA). The key purpose of the TMA is to help its members and the surrounding community reduce vehicle congestion and improve connectivity by pooling resources and developing coordinated transportation strategies. Key functions of the TMA include:[21]

- Create and manage a coordinated employee shuttle service that is also open to the general public
- Assist TMA members in meeting their TDM targets
- Coordinate monitoring and reporting of data on TDM strategies and progress towards meeting trip reduction and SOV targets
- Develop transportation management strategies and secure funding from private employers, property owners, the City, regional, state, and federal agencies

The role of the TMA will continue to grow over time as more members join and funding increases. With this growth, there will be increased opportunities for employers and residential developments to utilize coordinated district-wide services provided by the TMA rather than provide services directly to tenants on a development-specific basis.

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[21] Mountain View Transportation Management Association (2017). About Us. Retrieved from http://mvgo.org/about-us.html

TDM Coordinator

The project applicant will appoint an on-site transportation staff person to be responsible for implementing and evaluating the site's TDM program. The person will be available to provide customized travel guidance to residents, helping raise awareness and understanding of transportation options and ensuring that site users can find non-auto transportation options that meet their unique travel needs. They would act as a centralized transportation resource to in-building concierges, providing up-to-date transportation information and expert support to front-desk staff that may be less likely to have the same depth of knowledge of the transportation system.

The coordinator's responsibilities will include updating information on the online information board/screens, providing trip planning assistance and/or ride-matching assistance to residents, providing information about the subsidized mode programs and sustainable transportation incentives, and coordinating with the TMA. The on-site transportation staff person will also support efforts to collect data to evaluate the effectiveness of the overall TDM program and to understand opportunities to adjust the program to meet changing needs of residents and visitors.

3 MONITORING AND REPORTING

A robust monitoring program that allows the site's transportation team to adjust offerings over time is key to the success of this TDM Plan. Monitoring will allow the property management team to better understand the effects of different measures on travel behavior and determine how programs are meeting the needs of residents and visitors.

The objectives of an annual monitoring program are:

1. To measure progress toward achieving, or retaining, compliance with the TDM's goal of reducing single-occupancy vehicle trips by **6**%; and
2. To identify the most and least effective TDM measures, so that the former can be strengthened and the later can be replaced or significantly improved.

DATA COLLECTION PLAN

The project applicant will work with a transportation consultant or third party to design a plan for (1) collecting annual vehicle, bike, and pedestrian counts, and (2) administering an annual parking and residential travel surveys. A data collection plan should be updated to help facilitate consistent data collection and analysis over the life of the project. The on-site Transportation Coordinator will have the primary responsibility for ensuring that the driveway counts, parking counts, and resident surveys are conducted annually.

A count of the number of vehicles entering and exiting the project's driveways on a typical weekday during the AM and PM peak periods will be conducted annually by an independent third party to determine the number of vehicle trips being generated by the project. This information will be compared with the number of trips estimated for the project by the standard trip generation rates for apartments published by the Institute of Transportation Engineers (ITE).

Parking counts should be collected over a one-week period during the fall or spring of a "typical week" – one in which there are no holidays, major events, or inclement weather. For both the driveway and parking counts, the period of observations will not be disclosed in advance.

The following performance metrics will be collected for analysis:

- Driveway counts on a typical weekday during AM and PM peak periods
- Parking utilization throughout the day
- Cost-effectiveness of the TDM program (e.g. change in TDM program operating costs vs. change in drive-alone mode share)
- Resident survey of travel behavior, including the following:
  - Residential mode split (all trips and all modes, including differentiating between driving along and carpool/rideshare)Household vehicle ownership
  - TDM program awareness

– Participation in individual TDM programs

REPORTING

The results of the driveway counts and survey will be documented in an annual report to the City of Mountain View, along with an assessment of whether the TDM measures implemented during the preceding year led to a reduction in SOV trips for the project as a whole. The annual report to the City should also include a brief summary of the TDM measures that were in place during the preceding year, with an explanation of any changes or new programs.