

# County Line Multi-Modal Transit Center Study

FEHR & PEERS  
September 5, 2019

Prepared for:



In partnership with:



**EL DORADO TRANSIT**

Funded By:



Fiscal Year 2017-18, FTA Section 5304,  
Sustainable Transportation Planning Grant

# County Line Multi-Modal Transit Center Study

*Prepared for:*

**El Dorado County Transportation Commission**

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*In partnership with:*

**El Dorado Transit**

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# Executive Summary

The existing El Dorado Hills Park and Ride Lot is currently overcapacity and unable to meet existing or future demand for park and ride parking, transit service, and overall transit rider and provider needs. Recent documents published by El Dorado Transit, including the *El Dorado County Transit Authority Park-and-Ride Facilities Master Plan (September 7, 2017)*, the *White Paper: El Dorado Hills Transit Facility (2017)*, and the *Draft Western El Dorado County Park-and-Ride Facilities Study: Preliminary Assessment of Potential Sites* (Matthew C. Boyer & Associates, March 16, 2014) indicate a need to either upgrade the existing park and ride facility or identify potential sites for a new Transit Center. The intent of this study is to provide the data, analysis, and information necessary to identify the long-term solutions to accommodate and maximize future transit services and opportunities.

This study analyzed existing conditions including existing transit services, existing bicycle and pedestrian infrastructure, and demographics. Key opportunities and barriers that need to be taken into consideration when evaluating the future transit site were then identified. Key factors including parking supply, community design, passenger in-vehicle travel time, transit vehicle “deadheading”, parcel size and environmental constraints were taken into consideration. Future roadway improvements and planned growth areas in El Dorado Hills were also analyzed as the transit center should be located in an area anticipated for, or which can accommodate, higher density, transit-oriented development.

The future Transit Center has the opportunity to serve as a mobility hub, which connects multiple types of transportation modes and creates a sense of place. This study considered various aspects of mobility hubs such as access and circulation, location and size needs, existing and future multi-modal accessibility needs, community context and future transportation trends. The goal of the study is to identify ways to increase the productivity of the Transit Center site and transform it from its current function as a park and ride lot to a mobility hub. A mobility hub offers a range of multi-modal transportation options, is located in a denser urbanized area with intensive land uses to support a critical mass of people who live, work, and/or shop in the vicinity, gives high priority to pedestrians, provides access to real-time information through embedded technology and/or free wifi, contributes to the development potential of the area, serves as an anchor of economic vitality and provides a strong sense of place. Although originally envisioned to include a fueling station, this study includes a charging station, rather than a fueling station, because of the future transition to an electric bus fleet and anticipated increased demand for electric vehicles.

Ultimately, six sites were evaluated based on multiple criteria to determine which sites are most appropriate for the County Line Multi-Modal Transit Center. After analyzing the results of the evaluation, sites were grouped into three tiers: recommended, recommended for consideration, and not recommended. Potential reductions in vehicle miles traveled (VMT) and amenities that should be considered are also discussed along with other sustainable features that can help preserve the environment in El Dorado Hills and surrounding communities.

Lastly, the study outlines the implementation and phasing steps that El Dorado Transit and local agencies can use as a guide for building a Transit Center that provides excellent transit service, enhances the local community for the residents and employees in El Dorado Hills, and provides regional transit connectivity to existing Sacramento Regional Transit services and future transit services, including along the Capital Southeast Connector.

# Existing Conditions

## Study Area

The County Line Multi-Modal Transit Center Study is located on the Western Slope of El Dorado County within the El Dorado Hills Specific Plan area near the border of Sacramento County. For the purposes of transit ridership and network recommendations, the County Line Multi-Modal Transit Center Study focused its efforts on the area surrounding the existing El Dorado Hills Multi-Modal Transfer Facility (the Park-and-Ride lot) located on the northeast corner of White Rock Road and Latrobe Road, just south of Highway 50. The study area is bound by Harvard Way to the north, Clubview Drive / Golden Foothill Parkway to the south, the Silva Valley/Highway 50 interchange to the east, and the El Dorado County line to the west.

## History

With Green Valley Road to the north and what is now Highway 50 to the south (historically known as the Old Clarksville-White Rock Emigrant Road), immigrants heading west frequently travelled through El Dorado Hills during the mid-1800's as they searched for gold. In 1849, the Mormon Tavern was constructed and in 1851, it was enlarged to include a hotel and saloon. The tavern was frequented by teams and stages and in 1860, it became a remount station of the Central Overland Pony Express. Although development around El Dorado Hills began in the late 1800's/early 1900's, development in El Dorado Hills did not truly begin until the late 1950's/1960's when the first community plan was submitted. The Mormon Tavern was torn down in the 1960's for construction of Highway 50.

In the 1980'S, development of the El Dorado Hills Business Park as well as the Town Center began south of Highway 50. The El Dorado Hills Specific Plan (EDHSP) was adopted in 1988. The EDHSP encompasses approximately 4,000 acres in southwest El Dorado County. The plan envisioned predominantly lower-density, single-family homes with complementary commercial and recreational uses. In 1994, the El Dorado Hills Multi-Modal Transfer Facility was constructed using Proposition 116 transportation bond revenues. As shown in Figure 1, very little development existed near the facility at that time.

Over the next 25 years, El Dorado Hills developed as the EDHSP envisioned. Today, it consists of primarily lower-density single-family homes with commercial services dispersed throughout the area (see Figure 2).



*Mormon Tavern Historical Landmark*

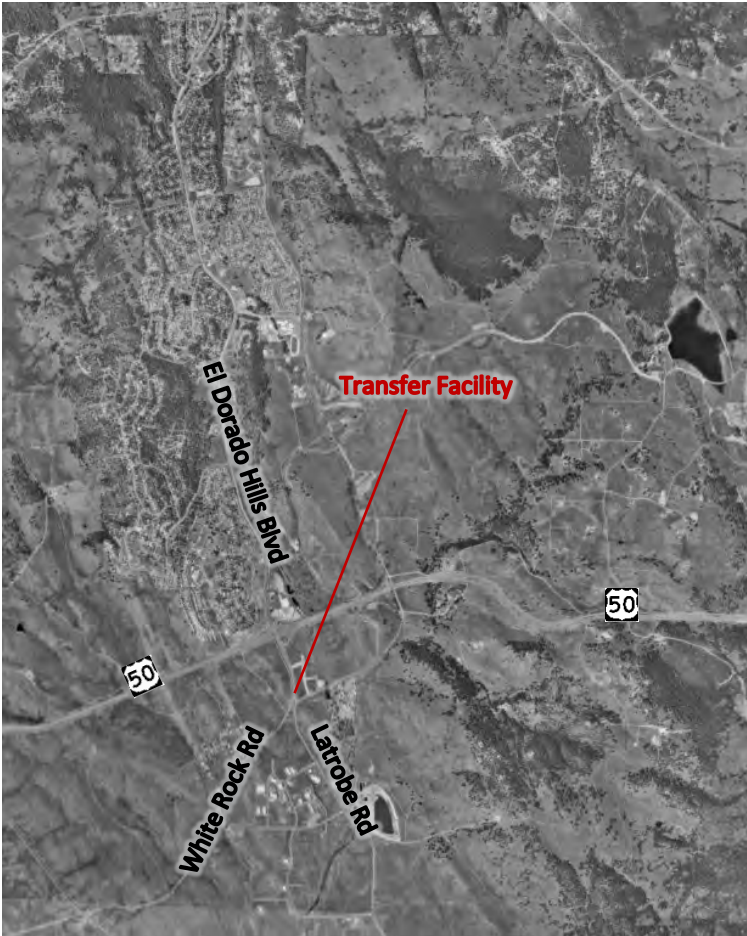


Figure 1: El Dorado Hills – 1993 Source: Google Earth



Figure 2: El Dorado Hills – 2018 Source: Google Earth

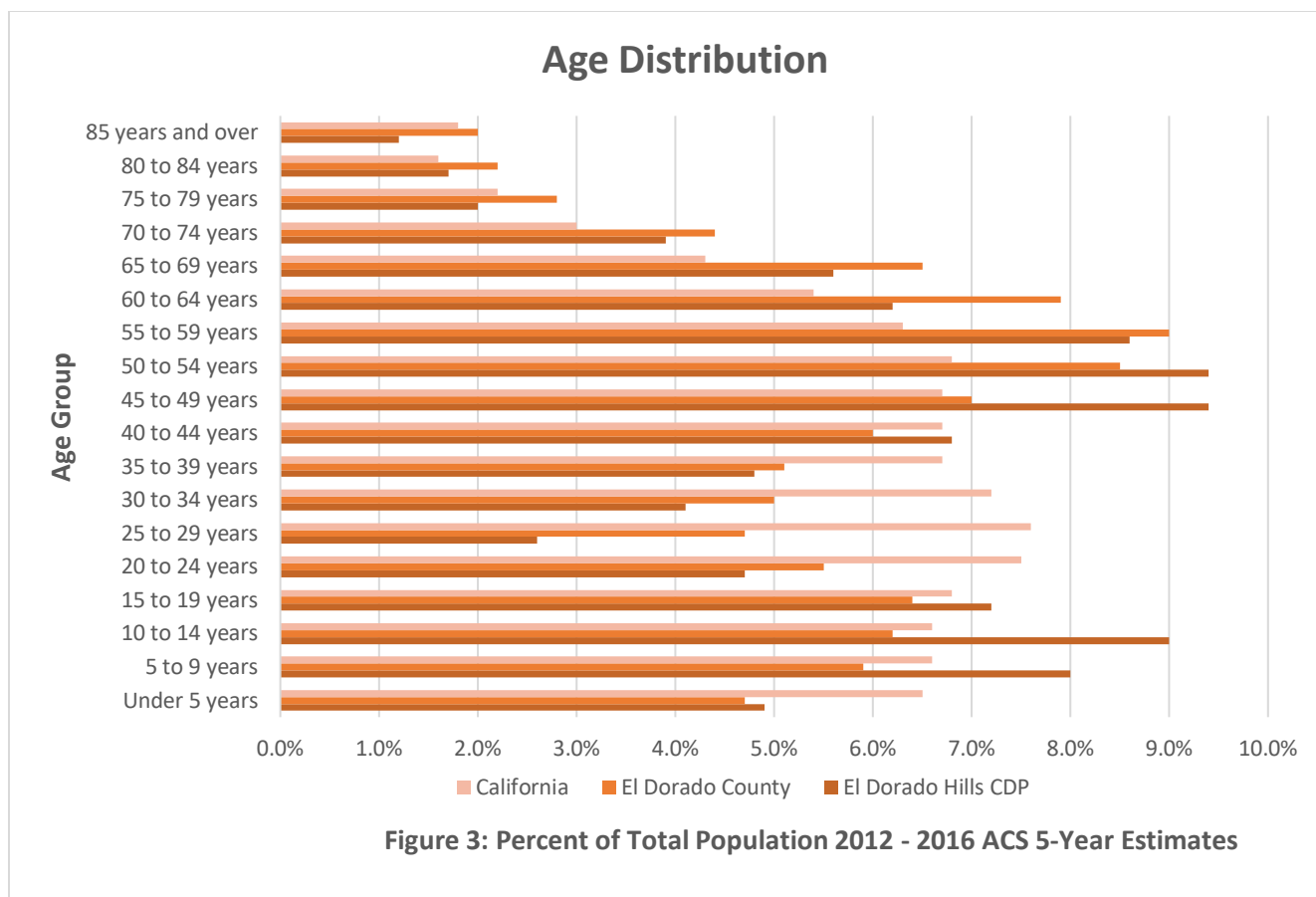
## Demographics

### Population

As of 2016, the El Dorado Hills census designated place (CDP) had an estimated population of 43,495 and El Dorado County had an estimated total population of 183,000 (2012-2016 ACS 5-Year Estimates). Between 2010 and 2035, El Dorado County anticipates an annual growth rate increase of approximately 1.03 percent in the Western slope (*2035 Growth Projections*, BAE Urban Economics, March 14, 2013), resulting in a projected population of approximately 52,000 in El Dorado Hills.

### Age Distribution

The median age in the El Dorado Hills CDP is 43.5, which is slightly younger than El Dorado County's median age of 45.2 but substantially higher than the State of California's median age of 36. As shown in Figure 3, a significant proportion of both El Dorado Hills and El Dorado County's population is comprised of elderly individuals. The older adult population (age 65 and above) in Western El Dorado County is expected to increase substantially over the next 20 years going from 22,956 in 2010 to 58,828 in 2040 (*Western El Dorado County Short- and Long-Range Transit Plan*, LSC Transportation Consultants, Inc., July 11, 2014)



#### *Jobs-to-Housing Balance*

The *2013-2021 Housing Element Update* (El Dorado County, 2013) indicates that in 2008 there were 44,764 jobs available in Western El Dorado County for individuals living in 61,821 housing units. In El Dorado Hills specifically, there were 14,020 jobs for 13,341 housing units, equating to a jobs-housing balance of approximately 1:1. Although the number of jobs/housing units appears balanced, the Housing Element notes that many of these jobs do not pay in the range to support the high-end housing being developed in the El Dorado Hills area. For this reason, individuals are living in more affordable areas and commuting to work in El Dorado Hills. Additionally, those living in El Dorado Hills are commuting out of the area for higher paying jobs. The *El Dorado Hills Community Needs Assessment and Highway 50 Corridor Operations Plan Final Report* (LSC Transportation Consultants, Inc., 2013), determined that 7,705 El Dorado Hills residents commute to locations in Sacramento, Placer and Yolo Counties, totaling 15,410 round trips daily. This is projected to increase as population increases. Overall Vehicle-Miles-Travelled (VMT) is also projected to increase. The Sacramento Area Council of Governments (SACOG's) *2035 Metropolitan Transportation Plan/Sustainable Communities Strategy* projects that in El Dorado County, the total weekday VMT on roadways will increase from 4,421,000 in 2008 to 5,328,200 by 2035 (Sacramento Area Council of Governments, 2016).

This data regarding age distribution, available jobs and overall commute patterns provides information necessary to understand who will be using the County Line Multi-Modal Transit Center and for what purposes. The information highlights the need to carefully consider where the Transit Center will be located and what amenities should be provided, as well as what modifications to the overall transportation network within the study area are necessary to properly serve the community.


## Recent Relevant Documents

### ***El Dorado County Transit Authority Park-and-Ride Facilities Master Plan (September 7, 2017)***

The *El Dorado County Transit Authority Park-and-Ride Facilities Master Plan* (El Dorado Transit, September 7, 2017) analyzes and quantifies the need for parking at each Park-and-Ride facility in El Dorado County and identifies policies, actions, and financing necessary to ensure adequate supply exists based on current and future needs. A primary focus is on maintaining and increasing public transportation services, specifically for commuters, and ensuring that current and future transit infrastructure is constructed with new projects as the area continues to develop. The Master Plan builds on the 2007 *El Dorado Transit Park-and-Ride Master Plan* (El Dorado Transit, 2007), which listed 12 priority projects for Park-and-Ride facilities in the County.

Three of the priority projects are located in El Dorado Hills: the County Line Multi-Modal Transit Center, the County Line Regional Fueling Station, and the El Dorado Hills Multi-Modal Parking Structure. The El Dorado Hills and the Cameron Park Park-and-Ride facilities are the only two facilities in El Dorado County that do not currently accommodate existing or future demand. Table 1 summarizes deficits for both facilities. By 2027, total demand for the El Dorado Hills Park-and-Ride facility is anticipated to be approximately 300 spaces; total demand for the Cameron Park Park-and-Ride facility is anticipated to be approximately 100 spaces.

**Table 1: Existing Parking Capacity Deficits**

Community	Existing Utilization			Year 2010		Year 2027	
	Existing Spaces	Existing Use	Existing Deficit	Additional Short-Term Need	Total Deficiency	Additional Long-Term Demand	Total Deficiency
El Dorado Hills	120	143+	23+	37	60 <sup>+</sup>	112	172 <sup>+</sup>
Cameron Park	33	47+	14+	15	30 <sup>+</sup>	40	70 <sup>+</sup>
<sup>+</sup> Calculation prior to expansion of Cambridge Road Park-and-Ride facility, completed in 2006. <sup>++</sup> Parking demand has exceeded capacity throughout El Dorado Hills and Cameron Park, for more than 10 years. The amount of suppressed demand (those that have 'given up' due to the lack of consistently-available parking, is very difficult to estimate. This is most acute at the El Dorado Hills Multi-Modal Transfer Facility. The deficit in El Dorado Hills has been addressed with the addition of a short-term overflow facility. Future development is likely to eliminate the opportunity for this facility.  <i>Source: U.S. Highway 50 Corridor Short Term Transit Plan (LSC Transportation Consultants, Inc, March 2006).</i>							
El Dorado Transit <a href="#">Park-and-Ride Master Plan</a> , September 2017							

The Master Plan notes that the County Line Multi-Modal Transit Center, the County Line Regional Fueling Station, as well as the El Dorado Hills Park-and-Ride should be located on the same site. However, the existing site is not large enough to accommodate all three. For this reason, El Dorado Transit began studying alternative sites that are large enough to accommodate all three priority projects.



#### ***White Paper: El Dorado Hills Transit Facility (2017)***

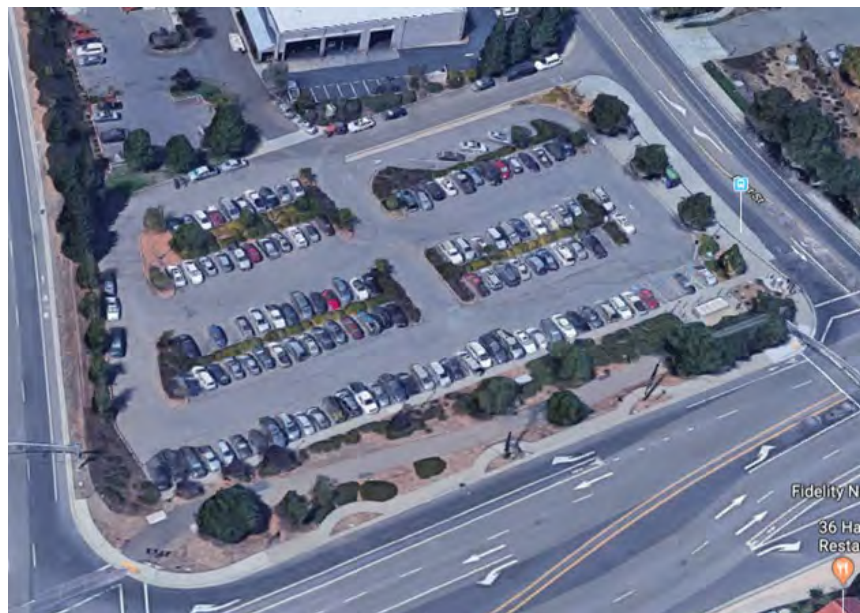
The *White Paper: El Dorado Hills Transit Facility* (El Dorado Transit, 2017) discusses concerns and constraints associated with the existing Park-and-Ride facility in El Dorado Hills and highlights the need to preserve and/or acquire land to construct a new facility. The *White Paper* emphasizes that the existing facility has been over capacity for at least 10 years. In 2013, El Dorado Transit leased additional parking approximately 0.75 miles away (on the southeast corner of Mercedes Lane and Vine Street), however, the overflow parking lot was intended to be a short-term solution because the *Master Site Plan Town Center East* (Ottolini & Associates, March 17, 2006) indicates future offices in this location.

Initially, a Multi-Modal Parking Structure was envisioned on the existing Park-and-Ride lot. However, the small size of the parcel and overhead high voltage power lines which cannot practically be relocated make this an impractical solution. Therefore, it was recommended that alternative sites which meet the following criteria be considered:

- Minimize impact on El Dorado Transit operating costs and on transit passenger travel times.
- Have adequate size to meet existing and future needs. The new parcel should be at least 4-acres.
- Strategically located in a location that will be compatible with adjacent parcels and within walking distance of key trip destinations such as commercial and employment centers.

Although both the *Master Plan* and the *White Paper* discuss the County Line Multi-Modal Transit Center, the County Line Regional Fueling Station, and the El Dorado Hills Multi-Modal Parking Structure, it was determined by El Dorado Transit staff that charging facilities, rather than a Regional Fueling Station should be included in the study. This is due to future electrification of buses and vehicles and anticipated decreased demand for compressed natural gas (CNG) fleet vehicles. Anticipated future demand for electric vehicle charging stations is analyzed in the study and taken into consideration when analyzing potential sites.

As previously mentioned, the El Dorado Hills Multi-Modal Parking Structure at the existing Park-and-Ride facility was determined impractical due to existing site conditions. For this reason, this study focuses on potential sites that meet the above specified criteria for the Park-and-Ride facility, the charging facility and the County Line Multi-Modal Transit Center, rather than the three priorities noted in the 2017 *Master Plan*. The Park-and-Ride facility, the charging facility, and the County Line Multi-Modal Transit Center are referenced as the “Transit Center” throughout this study.



Source: Google Maps 2018

## Existing Transportation Network

For the purposes of the County Line Multi-Modal Transit Center Study, discussion of roadways, pedestrian pathways, and bikeways within El Dorado County will be limited to those within the study area and major roadways/connections within proximity of the study area.

### *Roadway Network*

As shown in Figure 4, U.S. Highway 50 is the primary transportation corridor extending east/west through El Dorado Hills and provides connection from South Lake Tahoe to Sacramento. At this point in time, Green Valley Road is the only minor arterial that provides parallel capacity to U.S. Highway 50 by providing a full east/west connection between El Dorado Hills and the City of Placerville. White Rock Road is another east/west minor arterial and provides access from southwest El Dorado Hills to Sacramento. Additional east/west connections are planned including, but not limited to: the Capital Southeast Connector, which will provide access from U.S. Highway 50/Silva Valley Interchange in El Dorado Hills to Elk Grove and State Route 99 and Interstate 5, and the extension of Saratoga Way to Iron Point Road, which is currently under construction and will provide additional access north of U.S. Highway 50 from El Dorado Hills to Folsom.

Latrobe Road south of U.S. Highway 50 provides access to the El Dorado Hills Business Park and the Blackstone Development, as well as access into Amador County and beyond. This segment is frequently used by travelers as far south as Sonoma who use U.S. Highway 16 and Latrobe Road to access U.S. Highway 50 and areas north of U.S. Highway 50.



El Dorado Hills Boulevard and Silva Valley Parkway are both minor arterials that provide the primary north/south connection from U.S. Highway 50 to northern El Dorado Hills. The connection of Saratoga Way to Iron Point Road combined with the future extension of Empire Ranch Road to the future U.S. Highway 50 Empire Ranch Interchange at the Sacramento County / El Dorado County line will provide another north/south connection for El Dorado Hills residents.

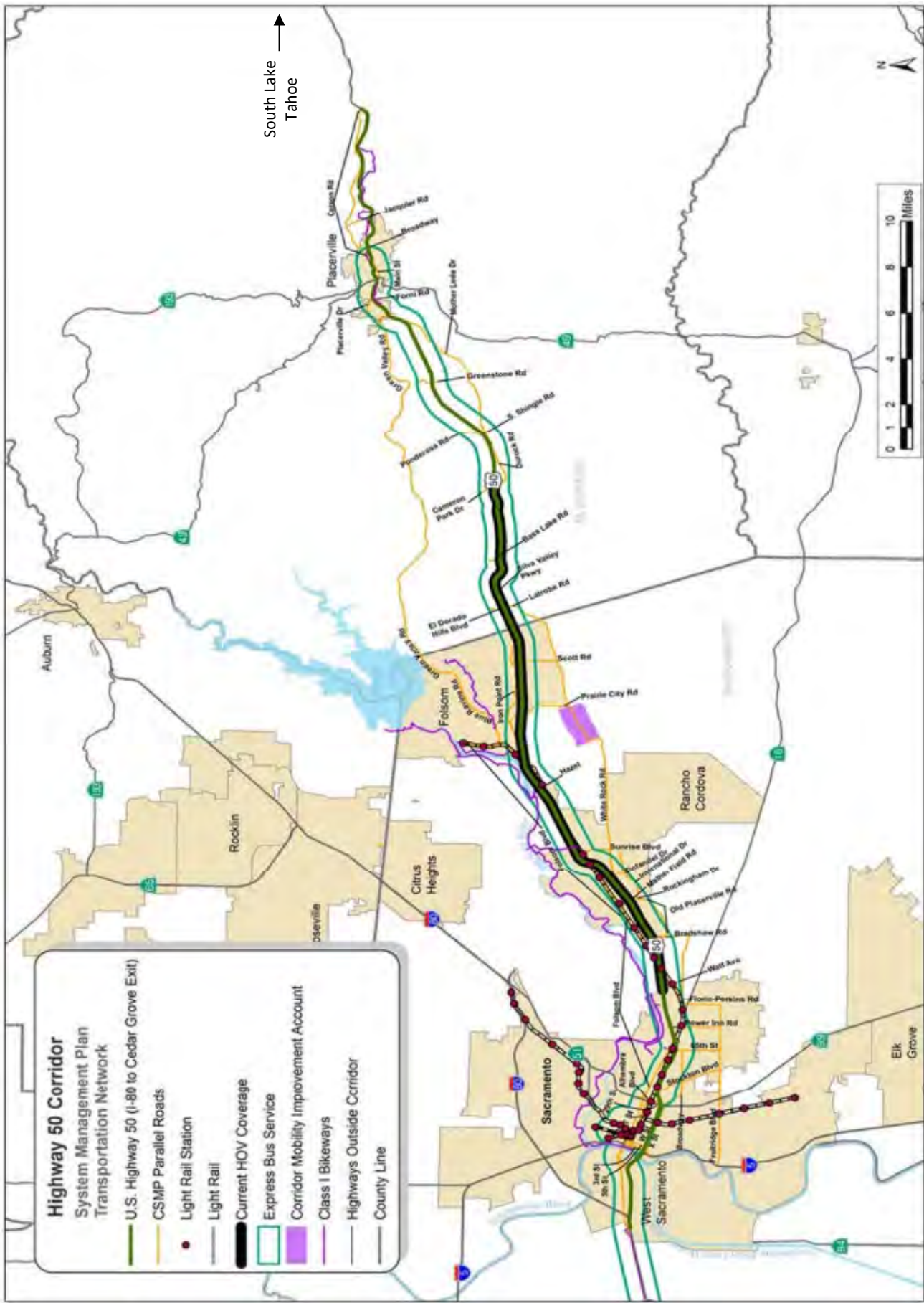


Figure 4: U.S. Highway 50 Corridor Map  
 Source: Final El Dorado County Regional Transportation Plan 2015-2035 (El Dorado County Transportation Commission, 2015)

## *Bicycle Network*

The *El Dorado County Bicycle Transportation Plan* (El Dorado County, 2010) proposes a bikeway system for the west slope of El Dorado County that is just over 280 miles in total length and includes one proposed segment that provides a connection from Placerville to Folsom and Sacramento via a Class I Bike Path known as the “El Dorado Trail”. The 2010 plan shows that bike facilities are proposed to extend from the El Dorado Trail and connect to major employment and activity centers between Placerville and El Dorado Hills. For the purposes of this study, the connecting facilities are broken down into four categories: Class I bike paths, Class II bike lanes, Class III bike routes and Neighborhood Collectors. Class I bike paths are paved paths that provide separation for vehicles and bicyclists. Class II bike lanes are traditional bike lanes where there is an exclusive lane for bicycles directly adjacent to vehicular traffic. Class III bike routes are routes that bicyclists share with vehicular traffic and are signed and have special pavement markings. Neighborhood Collectors are routes that are commonly used by residents and commuters but are not signed or marked for bicyclists.

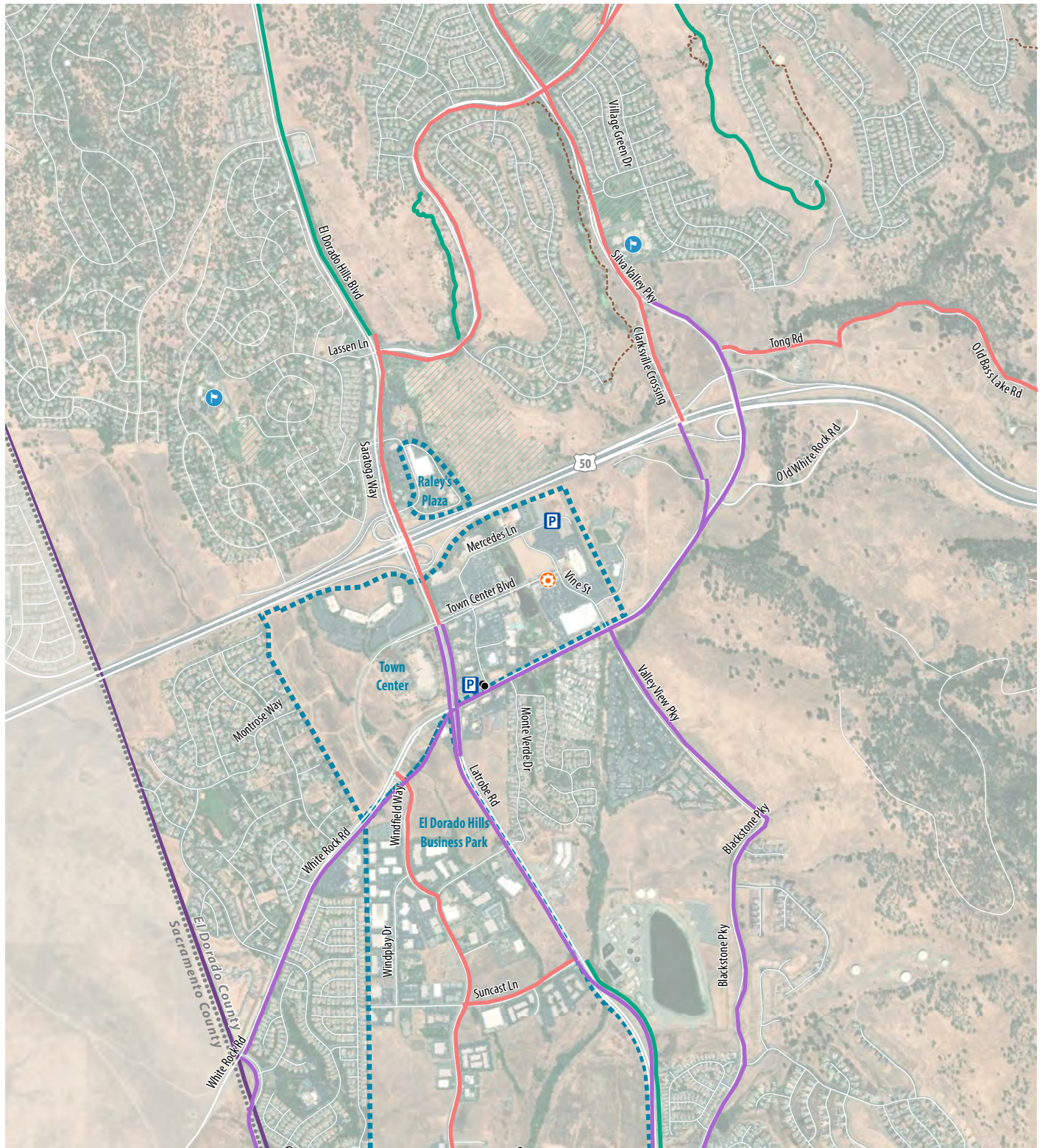
Existing bike facilities within the study area identified in Figure 5 and described below:

- Class I bike path on El Dorado Hills Boulevard between Serrano Parkway and Governor Drive located north of the study area.
- Class I bike path on Latrobe Road along the frontage of the Blackstone development.
- Class I bike path between Silva Valley Parkway and New York Creek Trail.
- Class I bike path along Silva Valley Parkway from Harvard Way to Appian Way.
- Class II bike lanes on Silva Valley Parkway from Appian Way to Green Valley Road
- Class II bike lane on southbound Silva Valley Parkway from Appian Way to Harvard Way
- Class II bike lanes on Latrobe Road from Town Center Boulevard to the Blackstone development located south of the study area.
- Class II bike lanes on White Rock Road from the Silva Valley Interchange to Carson Crossing Road.
- Class II bike lanes on Silva Valley Parkway from White Rock Road to Serrano Parkway.
- Class II bike lanes on Old Silva Valley Parkway from White Rock Road to Silva Valley Parkway.
- Class II bike lanes on Valley View Parkway/Blackstone Parkway between White Rock Road and Golden Foothill Parkway/Clubview Drive.
- Class II bike lanes on Carson Crossing Road between White Rock Road and Golden Foothill Parkway.
- Class II bike lanes on Post Street from Town Center Boulevard to and White Rock Road.

In addition to the above referenced bike paths/lanes, bicyclists can travel along Neighborhood Collectors such as Serrano Parkway, Suncast Lane, Golden Foothill Parkway, Windfield Way, Silva Valley Parkway, and segments of El Dorado Hills Boulevard.

The following Class I facility is scheduled to go to construction in 2019:

- Class I bike path along El Dorado Hills Boulevard from Governor Drive to Brittany Place



- |              |                         |                        |                     |
|--------------|-------------------------|------------------------|---------------------|
| Park & Ride  | Class I Bicycle Path    | Rural Cycling Routes   | County Boundary     |
| Bike Parking | Class II Bicycle Lane   | Neighborhood Connector | Park and Open Space |
| Bike Shop    | Class III Bicycle Route | Rail                   | El Dorado Hills     |
| School       | Natural Surface Trail   | Key Destinations       | City of Folsom      |



Figure 5  
Existing Bicycling Facilities Near El Dorado Hills

## *Pedestrian Network*

There is a relatively strong, well-connected built pedestrian environment in the study area. Specific Plans such as the Carson Crossing Plan, the Town Center West Plan and the Town Center East Plan require that new developments provide sidewalks on all new public streets. Many developments within the study area are relatively new and include either monolithic or separated sidewalks. However, pedestrian access along segments of Latrobe Road and throughout older developments such as the El Dorado Hills Business Park is limited. This creates substantial gaps in the overall transportation network in the study area. Although pedestrians can find alternate routes to major destinations, aside from the Business Park, this increases overall pedestrian travel time. If travel time is increased substantially, pedestrians may attempt to reduce travel time by choosing to walk along unsafe segments of the road or make unsafe maneuvers. Increased travel time and/or unsafe conditions may deter individuals from walking either from home or from the existing Multi-Modal Transit Center to major employment centers and/or to amenities in the Town Center.

## Existing Transit Services in El Dorado Hills

El Dorado Transit currently provides the following services in El Dorado Hills:

- **Dial-A-Ride** –El Dorado Transit’s Dial-A-Ride is the County’s premier, life-line transportation service, primarily for seniors and persons with disabilities. Dial-A-Ride is a curb-to-curb, shared ride service, by reservation only. Dial-A-Ride operates seven days a week, with rides available between 7:30 AM and 5:00 PM on the weekdays and 8:00 AM to 5:00 PM on Saturdays and Sundays.
- **SAC-MED** – Two days a week, SAC-MED buses transport passengers between park-and-ride lots, including the El Dorado Hills Park-and-Ride Lot, and non-emergency medical-related appointments in Sacramento County. The fare is \$10.00 one-way. SAC-MED rides must be scheduled at least 4 business days prior to the non-emergency medical appointment and no more than 14 days in advance.
- **Sacramento Commuter** – Provides 11 trips in the morning from park-and-ride locations in Western El Dorado County, including the El Dorado Hills Park-and-Ride Lot, to downtown Sacramento and 11 return trips in the afternoons Monday through Friday, as well as Reverse Commuter trips twice daily.
- **50 Express** – Service is provided hourly from 6:00 AM to 8:00 PM from the Missouri Flat Transfer Center to the El Dorado Hills Park-and-Ride, Folsom Iron Point light rail station, Folsom Lake College, Kaiser Permanente, and back.

To ensure multiple services can access the site at the same time, El Dorado Transit has indicated that the future Transit Center must be designed to accommodate at least nine buses. Ideally, local services will coordinate with regional services to minimize transfer delay and reduce overall commute time to the best extent possible.

## Opportunities and Barriers

The *White Paper*, the September 7, 2017 *El Dorado County Transit Authority Park-and-Ride Master Plan* and the *Draft Western El Dorado County Park-and-Ride Facilities Study: Preliminary Assessment of Potential Sites* (Matthew C. Boyer & Associates, March 16, 2014) evaluate and prioritize potential locations for the Transit Center. The following key factors were used to evaluate and prioritize sites:

- Existing Parking Supply: If the Transit Center is proposed in a location that currently consists of a parking lot, existing parking utilization should be studied to ensure nearby businesses are not negatively impacted by the reduction of parking.
- Community Design: The Transit Center should be located in close proximity to an existing or planned activity center and should be designed to complement and enhance the activity center by promoting bicycle and pedestrian travel. Locating the Transit Center near employment and commercial centers and providing pedestrian and bicycle access is critical for maximizing ridership.
- Passenger In-Vehicle Travel Time: Increases in travel time should be minimized. The Transit Center should be located within 2 minutes of the U.S. Highway 50 corridor to ensure minimal impacts to overall travel time, routing and on-time operations. Any increases in travel time should be off-set by improved amenities to existing and future riders. The Transit Center should also be located along or within close proximity of the future Capital Southeast Connector to minimize travel time for passengers utilizing future services on this expressway.
- Transit Vehicle “Deadheading”: Transit facilities are often used as the start or end of a transit route. The distance traveled by transit vehicles running out-of-service to and from the vehicle storage yard should be minimized to the best extent possible.
- Parcel Size: The Transit Center must be located on a parcel(s) large enough to accommodate passenger loading, bus bays, parking, circulation, landscaping, and any other amenities desired by the community (i.e. bus shelters, benches, food services, etc.). Parking demand should be centralized in as few facilities as possible, necessitating a parcel large enough to accommodate existing and future parking demand. The parcel should be at least 4-acres and should be located on a property that can be expanded vertically, if needed, to provide flexibility for significant long-term increases in demand.
- Environmental Factors: Environmental factors including but not limited to, topography, hazardous materials, or protected and/or endangered species can dramatically increase the amount of financial resources as well as time needed to complete a project. Sites with limited to no environmental constraints should be prioritized.

Interim facilities in Town Center East and the immediate area were considered as well as long-term facilities in Town Center West. Figure 6 displays the opportunity sites analyzed in the *White Paper*. It should be noted that the *Preliminary Assessment of Potential Sites* took place in 2014 and some sites identified are no longer available or feasible. Table 2 provides a summary of opportunities and constraints associated with each site.

<b>Table 2 – Potential Sites Opportunities and Constraints</b>		
<b>Site</b>	<b>Opportunities</b>	<b>Constraints</b>
1	-N/A	-Under construction; this site is no longer available
2	<ul style="list-style-type: none"> <li>-Approximately 7-acres</li> <li>-Easily accessible from U.S. Highway 50</li> <li>-Bike and pedestrian access to businesses and amenities in Town Center East</li> <li>-Easy access to El Dorado Business Park</li> <li>-Property owner has expressed interest in the project</li> <li>-Directly adjacent to future Capital Southeast Connector</li> </ul>	-No constraints have been identified at this time; however, new owners acquired the site in 2019 after the site analysis occurred and may or may not be open to a transit center
3	<ul style="list-style-type: none"> <li>-Easily accessible from U.S. Highway 50</li> <li>-Bike and pedestrian access to businesses and amenities in Town Center East</li> <li>-Easy access to El Dorado Business Park</li> <li>-Directly adjacent to future Capital Southeast Connector</li> </ul>	<ul style="list-style-type: none"> <li>-Small parcel size (approximately 1-acre)</li> <li>-Potential environmental limitations</li> <li>-New owners acquired the site in 2019 after the site analysis occurred and may or may not be open to a transit center</li> </ul>
4	<ul style="list-style-type: none"> <li>-Approximately 15-acres</li> <li>-Easily accessible from U.S. Highway 50</li> <li>-Bike and pedestrian access to businesses and amenities in Town Center East</li> <li>-Easy access to El Dorado Business Park</li> <li>-Directly adjacent to future Capital Southeast Connector</li> </ul>	-No constraints have been identified at this time; however, new owners acquired the site in 2019 after the site analysis occurred and may or may not be open to a transit center
5	<ul style="list-style-type: none"> <li>-Approximately 17-acres</li> <li>-Easily accessible from U.S. Highway 50</li> <li>-Bike and pedestrian access to businesses and amenities in Town Center East</li> <li>-Easy access to El Dorado Business Park</li> </ul>	<ul style="list-style-type: none"> <li>-Directly adjacent to existing single-family homes; careful consideration would need to take place during the design phase to ensure that adjacent residents are not negatively impacted</li> <li>-New owners acquired the site in 2019 after the site analysis occurred and may or may not be open to a transit center</li> </ul>
6	<ul style="list-style-type: none"> <li>-Approximately 6-acres</li> <li>-Easily accessible from U.S. Highway 50</li> <li>-Bike and pedestrian access to businesses and amenities in Town Center East</li> <li>-Easy access to El Dorado Business Park</li> </ul>	-No constraints have been identified at this time; however, new owners acquired the site in 2019 after the site analysis occurred and may or may not be open to a transit center
7	<ul style="list-style-type: none"> <li>-Easily accessible from U.S. Highway 50</li> <li>-Bike and pedestrian access to businesses and amenities in Town Center East</li> <li>-Directly adjacent to El Dorado Business Park</li> </ul>	-Slightly further away from U.S. Highway 50 which may increase vehicle travel times and walking/biking distance for residents living north of U.S. Highway 50
8	<ul style="list-style-type: none"> <li>-Located in Town Center East</li> <li>-Located close to El Dorado Business Park</li> <li>-Directly adjacent to future Capital Southeast Connector</li> </ul>	<ul style="list-style-type: none"> <li>-Small parcel size</li> <li>-Overhead power lines limit ability to build vertically</li> <li>-Potential traffic impacts</li> </ul>
9	<ul style="list-style-type: none"> <li>-Located in Town Center East</li> <li>-Located close to El Dorado Business Park</li> <li>-Directly adjacent to future Capital Southeast Connector</li> </ul>	<ul style="list-style-type: none"> <li>-Small parcel size</li> <li>-Overhead power lines limit ability to build vertically</li> <li>-Potential traffic impacts</li> </ul>

10	-Approximately 4-acres -Located in Town Center East	-Project recently received entitlements to construct a multi-family development
11	-Approximately 4-acres -Located in Town Center East	-Designated as retail/restaurant space in the Town Center East Master Site Plan -Located further from El Dorado Business Park and residential on the northwest side of HW 50 -Potential traffic impacts
12	-Located in Town Center East	-Small parcel size -Would remove existing parking from Town Center East -Designated as future office use -Located further from El Dorado Business Park and residential on the northwest side of HW 50 -Potential traffic impacts
13	-Bike and pedestrian access to businesses and amenities in Town Center East -Easily accessible from Silva Valley Parkway Interchange -Direct and easy access for residential south of White Rock Road -Directly adjacent to future Capital Southeast Connector	-Located further from El Dorado Business Park and residential on the northwest side of U.S. Highway 50

The *Preliminary Assessment of Potential Sites* notes that in 2014, County staff considered remnant parcels adjacent to the Silva Valley Interchange, but these sites would yield relatively small, isolated opportunities. At that time, property owners of larger parcels adjacent to the interchange were not interested in a friendly acquisition. However, a considerable amount of time has passed since initial discussions; additional conversations should happen with the property owners of the larger parcels adjacent to the interchange in the event they are now willing to reconsider. This area provides easy access on/off of U.S. Highway 50 but is located slightly further from Town Center East, the El Dorado Business Park and residential development near the County Line.

U.S. Highway 50 is the greatest barrier for each of the areas identified, except for potential properties located north of the Silva Valley interchange. Although various plans identify the need for a bicycle/pedestrian crossing at or near the U.S. Highway 50/Latrobe Rd/El Dorado Hills Blvd interchange, the improvement is not currently listed in the County's 2018 Capital Improvement Program. This physical barrier will encourage driving, increase parking demand, and increase VMT as it will make it difficult for residents living north of U.S. Highway 50 to safely and conveniently access the transit center without a vehicle. The *2035 Metropolitan Transportation Plan/Sustainable Communities Strategy* estimated an over/undercrossing at this location would cost approximately \$6.8 million and would be complete by 2028. This estimate was conducted in 2013 so the actual design/construction costs would likely be significantly higher today.



Figure 6 – Potential Transit Center Sites

Source: Draft Western El Dorado County Park-and-Ride Facilities Study: Preliminary Assessment of Potential Sites (Matthew C. Boyer & Associates, March 16, 2014)

# Future Roadways and Planned Growth Areas

There are various future roadway improvements and anticipated developments located in and near El Dorado Hills that were taken into consideration when analyzing appropriate sites for the Transit Center. Future roadway improvements and projects that are relevant to this study are described below.

## Capital Southeast Connector

The Capital Southeast Connector is a 34-mile expressway that will connect the southern area of Sacramento County to El Dorado County (see Figure 7). The connector was initially identified as a need in the 1980's due to an increasing regional population, congestion on U.S. Highway 50, minimal transportation options south of U.S. Highway 50, safety, job growth and economic development (Capital Southeast Connector, 2017). The Capital Southeast Connector Joint Powers Authority (JPA) was formed in 2006, general plans were amended in 2014, and project-level environmental review and engineering began in 2015.

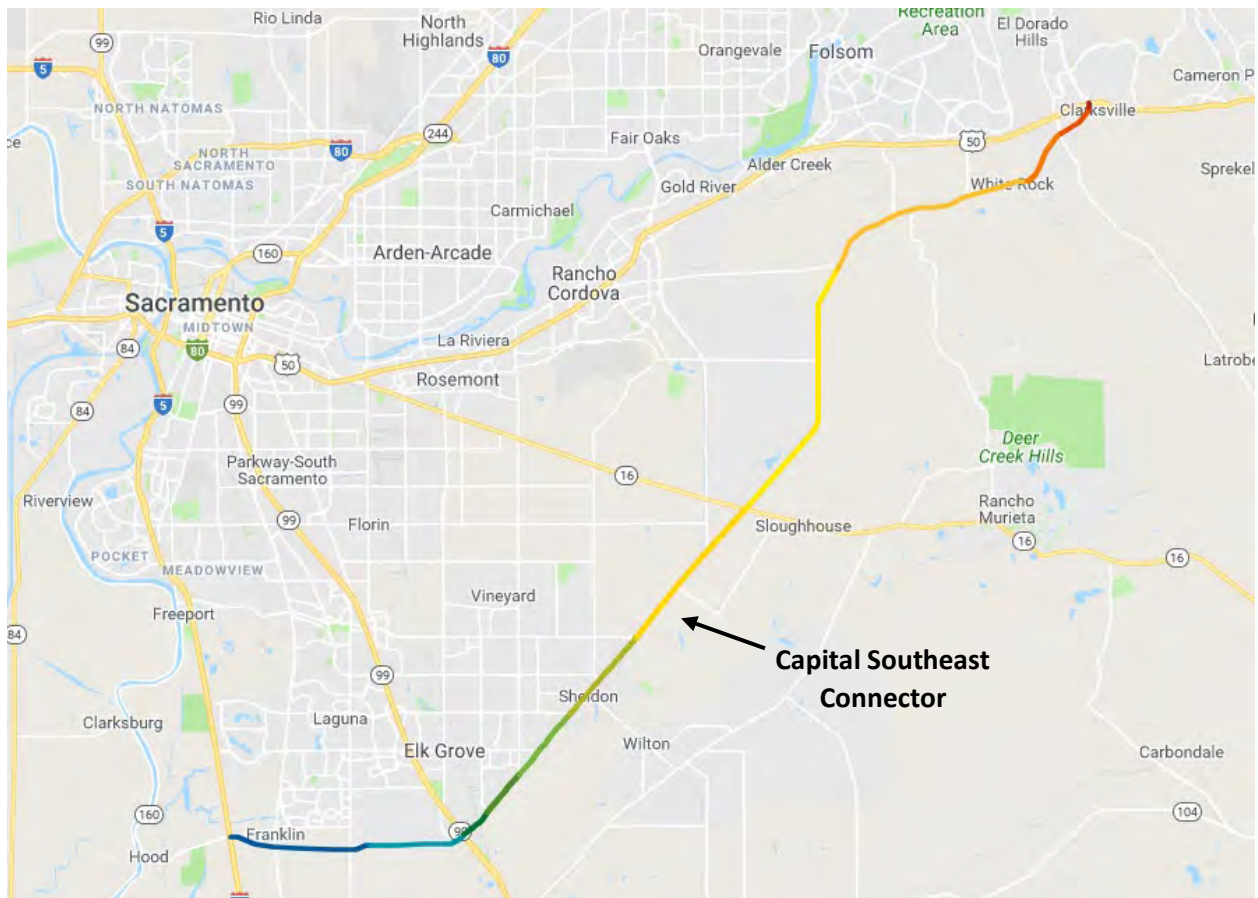


Figure 7 – Capital Southeast Connector

Source: Capital Southeast Connector, <https://www.connectorjpa.net/overview.html>

The Connector not only provides an opportunity for a new future transit connection to south Sacramento County, but it may directly impact access to the future Transit Center if the Transit Center site is located adjacent to White Rock Road. The Environmental Impact Report (EIR) for the Connector identifies the following access assumptions:

- Traffic Signal at US 50 Eastbound Ramps
- Traffic Signal at Vine Street / Valley View Parkway
- Right In / Right Out at Hidden River Way, Keagles Lane, and Monte Verde Drive
- Traffic Signal at Latrobe Road
- Traffic Signal at Windfield Way
- Traffic Signal at Manchester Drive
- Right In / Right Out at Bailey Circle

The EIR states that additional connections may be allowed if the JPA determines that the design would ensure an acceptable LOS and meet performance standards for the Connector. In the event a site adjacent to the Connector is selected, coordination with the JPA should take place to determine if an additional access location would be possible. As of 2019, the County will be providing full access at Bailey Circle.



## High-Occupancy Vehicle Lanes – U.S. Highway 50

High-Occupancy Vehicle (HOV) lanes, which currently exist along U.S. Highway 50 from El Dorado County to Watt Avenue, will be extended into downtown Sacramento. The extension of the HOV lanes will likely reduce congestion and travel time (at least temporarily) on U.S. Highway 50. This will shorten the commute time for those using El Dorado Transit bus service, which may attract additional riders. Caltrans anticipates that construction of the HOV lanes will begin in 2019 and will be completed by 2024.



Figure 8 – Highway 50 HOV Lane Extension Project

Source: Caltrans, 2019. <http://www.dot.ca.gov/d3/projects/subprojects/00216/index.html>

*Metropolitan Transportation Plan / Sustainable Communities Strategy Growth Areas*

In 2016, the Sacramento Area Council of Governments (SACOG) adopted the 2016 Metropolitan Transportation Plan / Sustainable Communities Strategy (MTP/SCS), which is a document that identifies transportation improvements in the Sacramento Region that are necessary to accommodate existing and future growth anticipated through 2035. SACOG created a land use pattern that includes five different Community Types – Center and Corridor Communities, Established Communities, Developing Communities, Rural Residential Communities and Lands Not Identified for Development in the MTP/SCS Planning Period. Community types were determined based on anticipated growth stated in local land use plans.

Within El Dorado Hills, SACOG identifies Town Center East/West as a Center/Corridor Community and areas directly north as primarily Established Communities. However, as indicated in Figure 9, much of the surrounding area is considered a Developing Community.

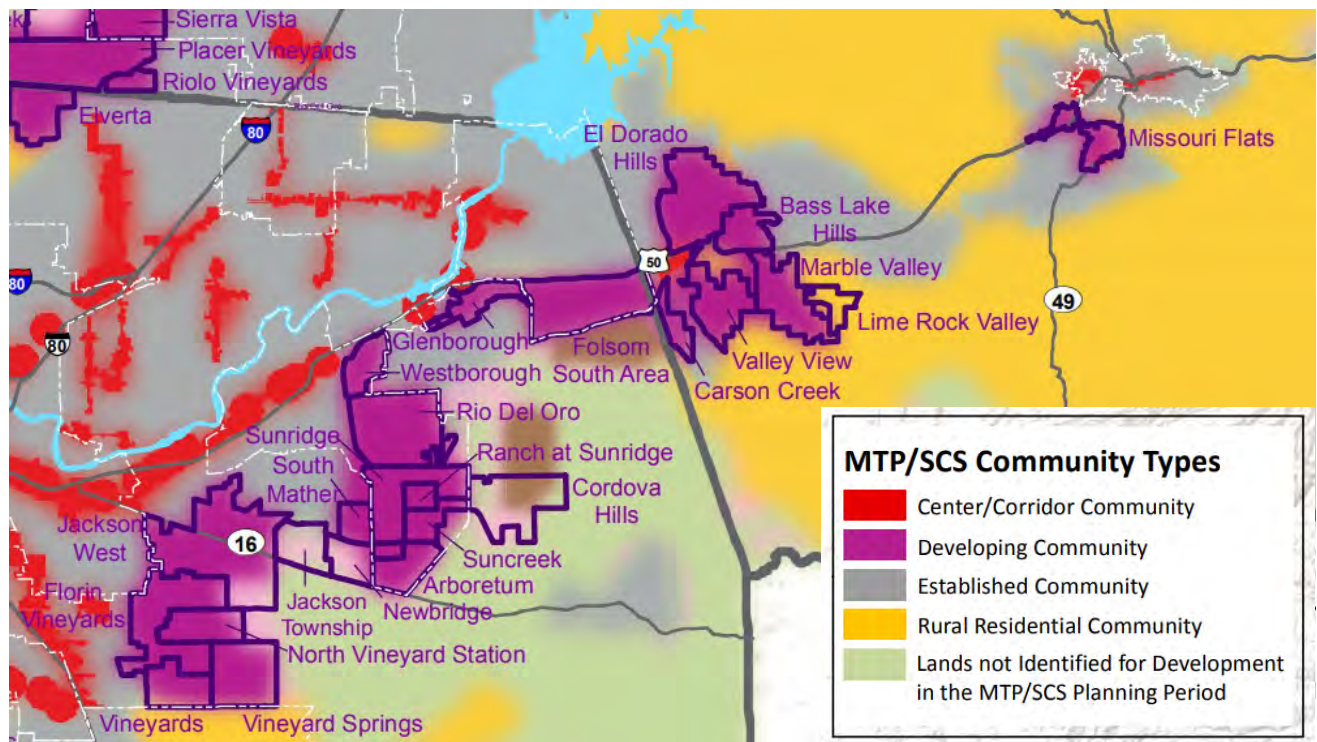


Figure 9 – MTP/SCS Land Use Pattern

Source: SACOG 2016 Metropolitan Transportation Plan / Sustainable Community Strategy – Appendix E-3

Table 3 indicates the total number of housing units and jobs in and near El Dorado Hills that are anticipated in the MTP/SCS. As shown, the MTP/SCS includes approximately 115,000 new units that are currently either planned or proposed; approximately 62,000 are anticipated to be constructed by 2035. The MTP/SCS also anticipates approximately 27,000 employees by 2035 and 105,000 employees when the plan areas are built out. Additionally, a total of approximately 19,000 units and 24,000 jobs which were not included in the MTP/SCS are planned within the Lime Rock Valley Specific Plan Area, the Cordova Hills Specific Plan Area, the Jackson Township Area and the Newbridge Specific Plan Area (SACOG 2016 Metropolitan Transportation Plan / Sustainable Community Strategy – Appendix E-3, 2013). These units and jobs were not included due to their current stage in the planning process or anticipated slow growth but are noted for inclusion in the future pending market demand.

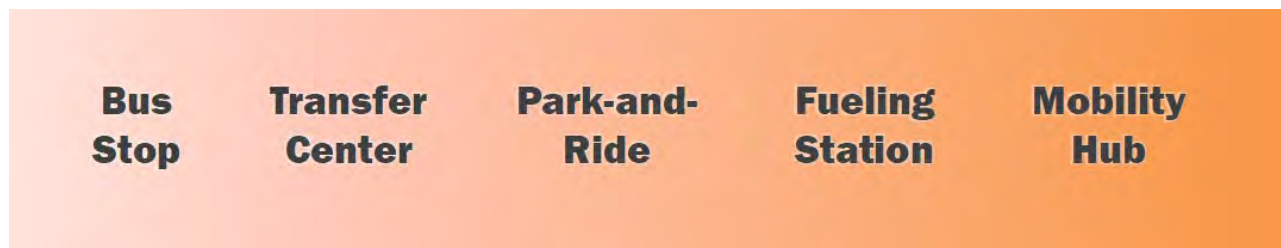
<b>Table 3 – Approved or Pending Greenfield Plans included in the 2035 MTP/SCS as Developing Community</b>				
	<b>Estimate of Housing to be Built by 2035</b>	<b>Estimate of Housing at Build Out</b>	<b>Estimate of Employees by 2035</b>	<b>Estimate of Employees at Build Out</b>
<b>El Dorado County</b>				
Bass Lake Hills Specific Plan	1,392	1,458	118	109
Carson Creek Specific Plan	1,162	1,700	47	3,879
El Dorado Hills Specific Plan	4,996	6,162	2,047	3,368
Missouri Flat (Diamond Springs – El Dorado)	498	844	3,436	6,497
Valley View (Blackstone and East Ridge) Specific Plan	1,350	2,840	132	156
Village of Marble Valley Specific Plan	647	3,236	0	1,988
<b>Sacramento County</b>				
South Folsom Plan Area Specific Plan	6,688	10,210	1,291	13,619
Glenborough at Easton Specific Plan	3,262	3,239	1,795	1,796
Westborough	756	6,078	201	5,444
Sunridge Specific Plan	7,571	8,763	2,170	3,563
Rio Del Oro Specific Plan	8,057	11,601	4,325	12,558
Ranch At Sunridge Specific Plan	2,296	2,713	355	358
Suncreek Specific Plan	1,834	4,893	185	1,404
Arboretum	571	4,742	96	3,488
North Vineyard Specific Plan	3,292	6,063	379	563
Vineyard Springs Specific Plan	3,740	5,942	1,394	764
Vineyard Community Plan	5,251	6,610	1,671	1,546
Florin Vineyard Specific Plan	2,552	9,919	1,528	6,243
West Jackson Specific Plan	5,150	15,658	5,167	32,839
Mather South Specific Plan	1,039	2,504	239	5,073
<b>Total</b>	<b>62,104</b>	<b>115,175</b>	<b>26,576</b>	<b>105,255</b>

# Transit Station Facilities

The Transit Center has the opportunity to provide a host of services for transit riders in eastern El Dorado County, residents of El Dorado Hills, and employees in the Town Center and Business Park. There is a wide spectrum of transit station facility types, including bus stop, transfer center, park-and-ride, fueling station and mobility hub, all which provide different services and amenities. At a minimum, a simple bus stop provides a designated location for transit riders to enter or exit a bus. When multiple bus routes coalesce at a single location, or transfer center, passengers can expand their range of destinations. Park-and-Ride facilities allow for long-term parking for transit riders. Fueling stations may add amenities to a transit center such as compressed natural gas (CNG) tanks, or electrical substations to allow for transit vehicles and/or parked cars to recharge. Finally, mobility hubs combine many of these services and create a multimodal link that can expand transit access to a broader group of transit riders. The type of facility chosen is predicated upon user demand, service type, amenity, and land use context.



The future Transit Center has the opportunity to serve as a mobility hub, which connects multiple types of transportation modes and creates a sense of place. This study considered multiple aspects of mobility hubs such as access and circulation, location and size needs, existing and future multi-modal accessibility needs, community context and future transportation trends.

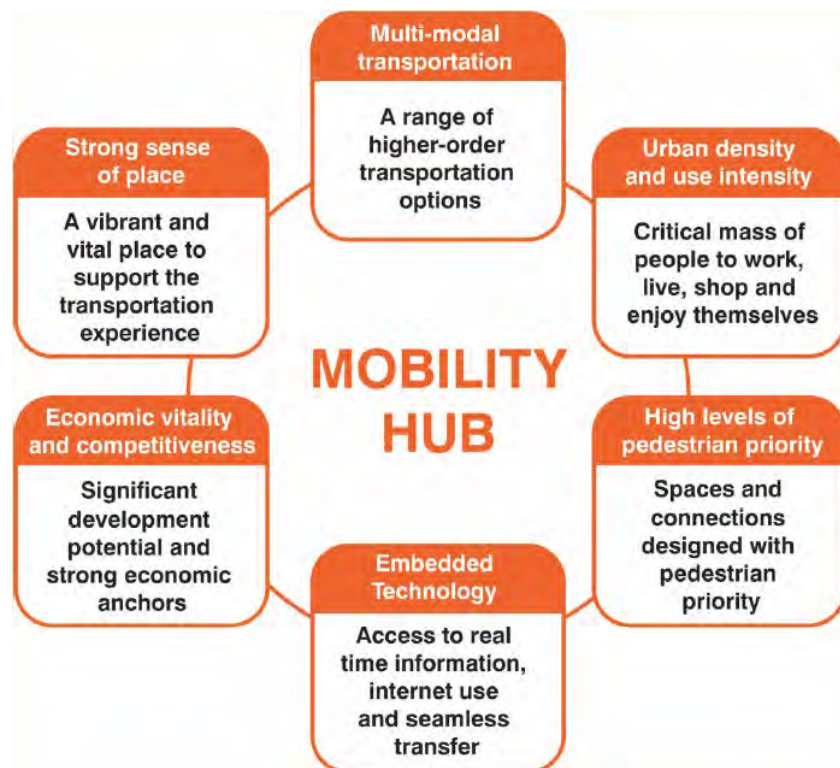


*Transit Station Spectrum*

# Mobility Hubs

The study's goal is to increase the productivity of the Transit Center site and transform it from its current function as a park-and-ride lot to a mobility hub. Mobility hubs are places of connection that bring together multiple modes of transportation with information and technology to help people easily and efficiently assess and access travel options. They range in size and scale, depending on the specific context. Several components, including the six criteria listed below, will ensure the success of a mobility hub:

1. It offers a range of multi-modal transportation options
2. It is located in a denser urbanized area, with intensive land uses to support a critical mass of people who live, work, and/or shop in the vicinity
3. It gives high priority to pedestrians
4. It provides access to real-time information through embedded technology and/or free wifi
5. It contributes to the development potential of the area and serves as an anchor of economic vitality
6. It provides a strong sense of place



Source: Metrolinx, Mobility Hubs Green Paper #2

# Transit Center Site Evaluation

## Overview

Working from the originally evaluated sites from the *Preliminary Assessment of Potential Sites* (2014) and new development opportunities, six sites were evaluated based on multiple criteria to determine which sites are most appropriate for the County Line Multi-Modal Transit Center. After analyzing the results of the evaluation, sites were grouped into three tiers described below: recommended, recommended for consideration, and not recommended.



## Analysis Criteria

Using the six criteria for a successful mobility hub as a framework, goals were created with a subset of analysis factors to compare and contrast the potential transit center sites.

### *Multimodal Transportation*

Metrics including transit vehicle accessibility and transit rider multimodal accessibility were used to analyze each site. Sites within close proximity and easy access to U.S. Highway 50 and the Capital Southeast Connector are beneficial as they reduce travel time for regional express buses getting on/off the freeway to pick-up passengers, which helps provide a competitive travel option to driving alone. Low stress and connected bicycle facilities will help transit riders access destinations around the mobility hub and provide options for local residents and employees to use a bicycle for their first/last mile trip. The

ability to accommodate sufficient parking and curbside access is important to accommodate current and anticipated drivers, and account for growth in popularity of ride sharing services (transportation network companies, TNC) such as Uber and Lyft. Finally, sites that can accommodate multiple transit lines connecting riders between regional express buses, local fixed routes, and micro-transit or dial-a-ride services were more attractive.

### *High Level of Pedestrian Priority*

Sites that are easily accessible for people walking and provide access to a wide range of destinations including adjacent housing, nearby employment, and daily retail services can increase transit ridership to a broader group of riders. Pedestrian connections can be created with comfortable sidewalks (such as wide, shaded, well-lit and/or detached sidewalks) along the roadways near the mobility hub, walkways through adjacent development, and by the emerging shared-use trail system in El Dorado Hills. Special attention



should be given to improving pedestrian crossings of major arterials with improved at-grade signalized crossings or grade separated crossings where feasible. The crossing of Highway 50 has been observed as a major barrier to residents.

### *Urban Density and Use Intensity*

Based on existing and planned land uses, mobility hubs succeed when the density of development creates a critical mass of transit riders. For this study, each potential site is evaluated based on its proximity to existing and planned housing, as well as job creating land uses.

### *Economic Vitality, Competitiveness, and Cost Effectiveness*

Besides connectivity, the site itself needs to enhance the local economy and be a cost-effective use of the land. The sites with the greatest development potential should be large enough to accommodate the anticipated amenities, and unconstrained by environmental, utility, or terrain considerations. The site also needs to be able to accommodate future electric vehicles by having existing electrical utility infrastructure in the vicinity. The most beneficial sites will be adjacent to complementary land uses or underdeveloped parcels that could support transit-oriented development. The site should also be able to accommodate solar panels and other sustainable features.

### *Strong Sense of Place*

The mobility hub should have a prominent location within the community that enhances the sense of place and creates a centralized activity center. Sites that are visible from the prominent roadways will allow for easier access and wayfinding. Proximity to other public spaces will also enhance the sense of

security by having longer periods of activation throughout the day and a higher level of natural surveillance by transit riders and other members of the community. Sites that are isolated from major roadways or hidden by terrain are not as desirable.



#### *Embedded Technology*

Mobility hubs utilize technology to enhance the transit operator's and riders' experiences. Sites that can accommodate real-time vehicle tracking, live maps, and safety features will be more successful. Sites that provide easy access to ride hailing services (TNC), taxis, and on-demand transit will provide connections for longer first/last mile trips. Centralized sites with a micro-mobility hub which offers bike share, electric assist bikes, and/or scooters provide opportunities for shorter first/last mile trips.

# County Line Multi-Modal Transit Center Study

● Good
 ◐ Fair
 ○ Poor
 ✓ Recommended Sites
 ✓ Recommended For Consideration

Goals	Analysis Factor	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
<b>RECOMMENDED SITES</b>			✓	✓		✓	✓
Multi-Modal Transportation	Proximity to US 50	◐	◐	◐	○	●	●
	Proximity to Capital Southeast Connector	◐	◐	◐	○	◐	◐
	Limited Number of Turning Movements Required to Access Site	◐	◐	●	◐	◐	●
	Limited Number of Left Turns Required to Access Site	◐	◐	●	◐	○	●
	Bicycle Accessibility	◐	●	●	○	◐	◐
	Bicycle Comfort	○	◐	◐	○	○	○
	Ability to Accommodate Necessary Parking	○	●	●	◐	●	●
	Roadway Access	◐	◐	●	◐	◐	●
	Frontage Loading Potential	○	●	●	○	●	◐
	Connection to Other Transit	◐	●	●	○	●	●
High Levels of Pedestrian Priority	Pedestrian Accessibility	◐	●	●	○	○	○
	Pedestrian Comfort	◐	●	●	○	○	○
Urban Density and Use Intensity	Residential Density	◐	●	◐	◐	○	○
	Employment Density	◐	◐	●	○	○	○
Economic Vitality, Competitiveness, and Cost Effectiveness	Size	○	●	●	◐	●	●
	Opportunity for Transit-Oriented Development on Adjacent Parcels	○	◐	●	◐	○	◐
	Adjacent Land Designated for Development	○	●	●	○	●	◐
	Compatibility with Adjacent Transit Supportive Uses	○	●	●	○	◐	◐
	Proximity to Major Retail	◐	○	◐	◐	◐	●
	Proximity to Convenience Retail	◐	◐	◐	◐	○	●
	Ability to Accommodate Electric Vehicles						
	Ability to Accommodate Solar	○	●	●	○	●	●
	Opportunity to Utilize Existing Infrastructure	◐	○	○	◐	○	○
	Zoning Consistency	○	○	◐	○	●	○
	Minimal Potential Environmental Constraints	●	◐	○	●	○	●
	Minimal Potential Terrain Constraints	●	◐	◐	●	○	○
	Minimal Potential Utility Constraints	○	◐	●	●	●	●
Strong Sense of Place	Proximity to Public Spaces	●	◐	◐	●	◐	○
	Site Visibility	●	●	◐	◐	○	○
Embedded Technology	Ability to Accommodate Interactive Maps, Real Time GPS, and Other Technology	●	●	●	●	●	●
	Ability to Accommodate Transportation Network Company Pick-Up/Drop-Off	○	●	●	◐	●	●
	Ability to Implement Successful Bike Share	●	●	●	◐	◐	○

## Recommended Sites

Sites 2 and 3 are both recommended sites as they scored either good or fair in almost all criteria. Both sites are large enough to accommodate bus loading, parking and buildings, provide easy and the most comfortable access for bicyclists and pedestrians, have the ability to accommodate existing and future parking demand without a parking garage, are located adjacent to land designated to be developed with transit supportive uses, have the ability to implement successful bike share, and have the ability to provide successful connection to other transit providers. In addition to these strengths, site 2 is located within proximity of the future Capital Southeast Connector and high residential density and has strong site visibility. Additional site 3 strengths include being located adjacent to sites that provide opportunity for transit-oriented development, having a long linear frontage being located near high employment density, and requiring a minimal number of turns and left turns to access the site (making it easier and quicker for buses to navigate to/from the site). However, if site 3 is selected, it is important to note that vehicular access along Latrobe Road is currently prohibited. Coordination with El Dorado County should occur to determine if the access restriction could be removed or modified prior to moving forward with the site.



## Recommended for Consideration

Although sites 5 and 6 did not rank as high as sites 2 and 3, both sites have strong characteristics necessary for the Multi-Modal Transit Center and are recommended for consideration. Sites 5 and 6 were similar to sites 2 and 3 in that they are large enough to accommodate bus loading, parking and buildings, have the ability to accommodate existing and future parking demand without a parking garage, and have the ability to provide successful connection to other transit providers. Unlike sites 2 and 3, sites 5 and 6 do not provide easy or comfortable access for bicyclists and pedestrians and are not located near high residential or employment density due to their more remote locations. Additionally, both sites provide the least amount of visibility out of all six sites analyzed. Both sites do however, have additional strengths that would be beneficial long-term. Site 5 is easily and quickly accessible from both US 50 and the future Capital Southeast Connector, has a long linear frontage which increases frontage loading potential, and is permitted by right under the current zoning. Site 6 requires a limited number of turns and left turns to access the site and is located within proximity of land that is anticipated to be developed with both regional retail and convenience retail.

## Not Recommended

Sites 1 and 4 are not recommended as they do not meet most of the criteria needed for the Multi-Modal Transit Center. Site 1 scored strong in proximity to public spaces, site visibility, and minimal potential for environmental and terrain constraints, however, the small parcel size, inability to accommodate existing and proposed parking without a parking garage, overhead power lines, and limited opportunity for higher density development adjacent to the site decrease the site's potential to serve as a successful location for the transit center. Site 4 ranked poor/fair in almost all criteria primarily due to its location within Town Center East. Because the site is located in the northeast corner of Town Center East, it is difficult to access from both US 50 and the future Southeast Connector, requires many turning movements, has no frontage loading potential, has low visibility, is unable to provide an easy connection for other transit providers, is not directly adjacent to transit supportive uses, is not adjacent to land designated for development and is difficult to access for bicyclists and pedestrians. However, if site 4 were to be more centrally located within the Town Center, it likely would score significantly higher in almost all criteria as it would be easier to access for automobiles, buses, bicyclists and pedestrians, closer to existing uses including regional retail and convenience retail, more visible, and closer to the El Dorado Hills Business Park. In the event existing parking more centrally located within the Town Center could be converted to the transit center with a parking garage, it would likely be a very successful and viable location.

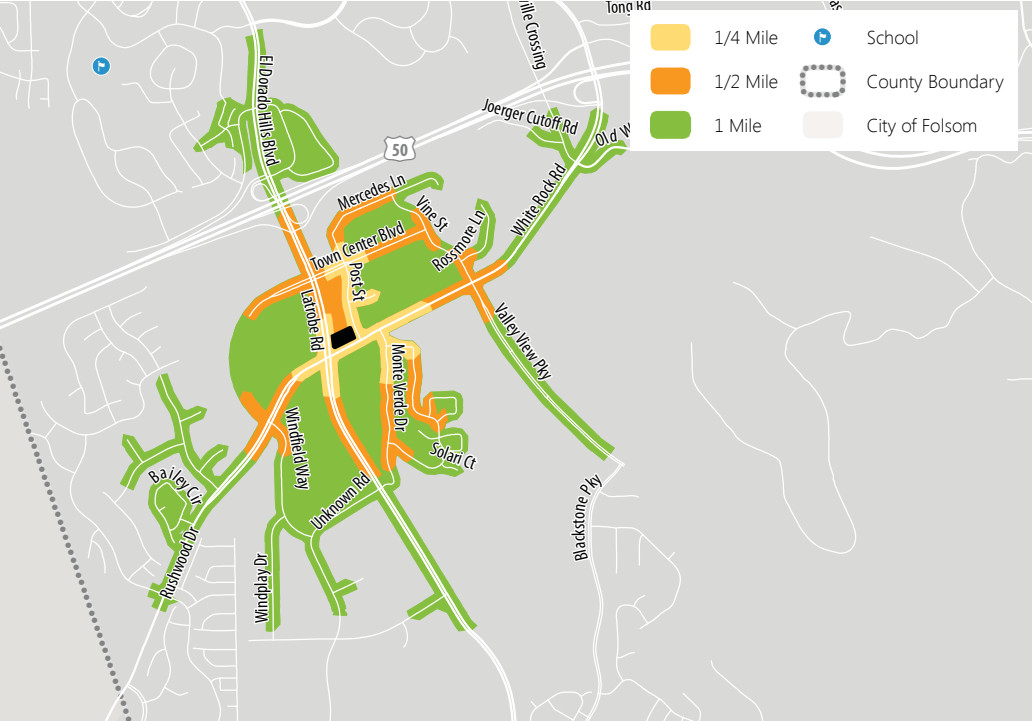


# County Line Multi-Modal Transit Center Study

## Travel Shed

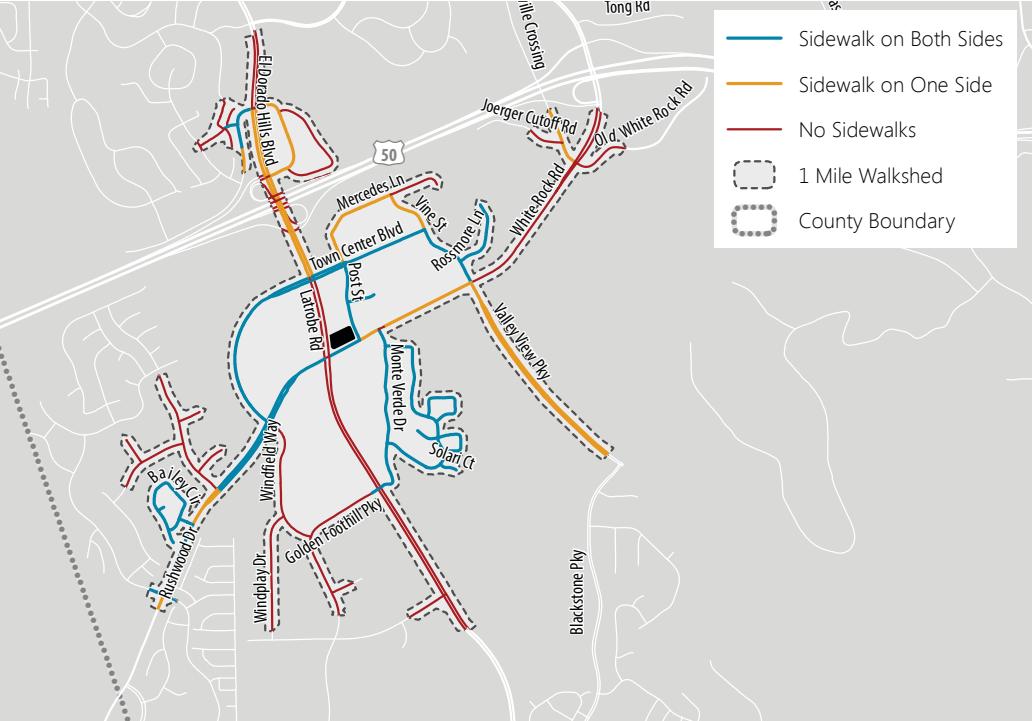
Distance the average person is willing to walk or bike

Walking  
1/4 mi, 1/2 mi, 1 mi areas



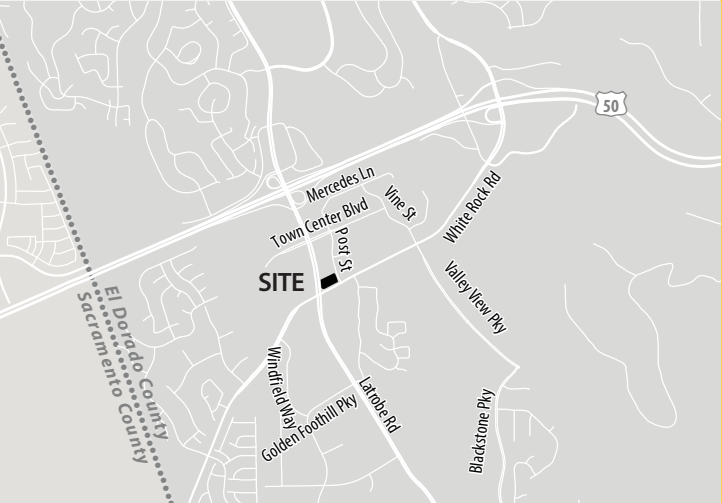
## Sidewalk Gaps

Identified within the walkshed area



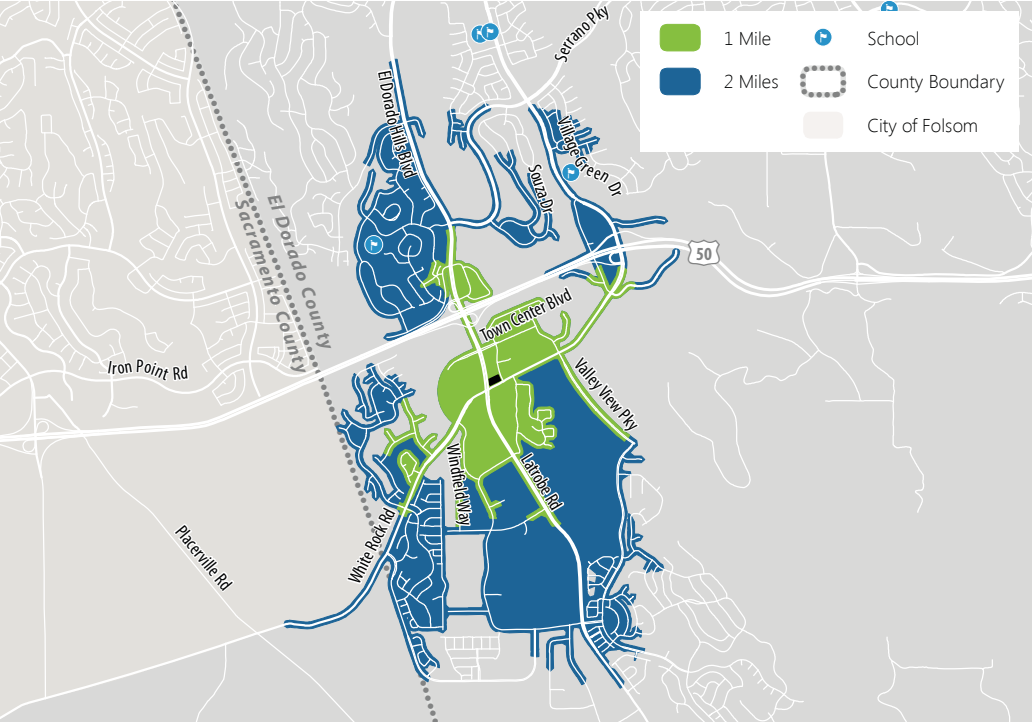
## TRANSIT CENTER SITE OPTION 1

# Latrobe Road & White Rock Road



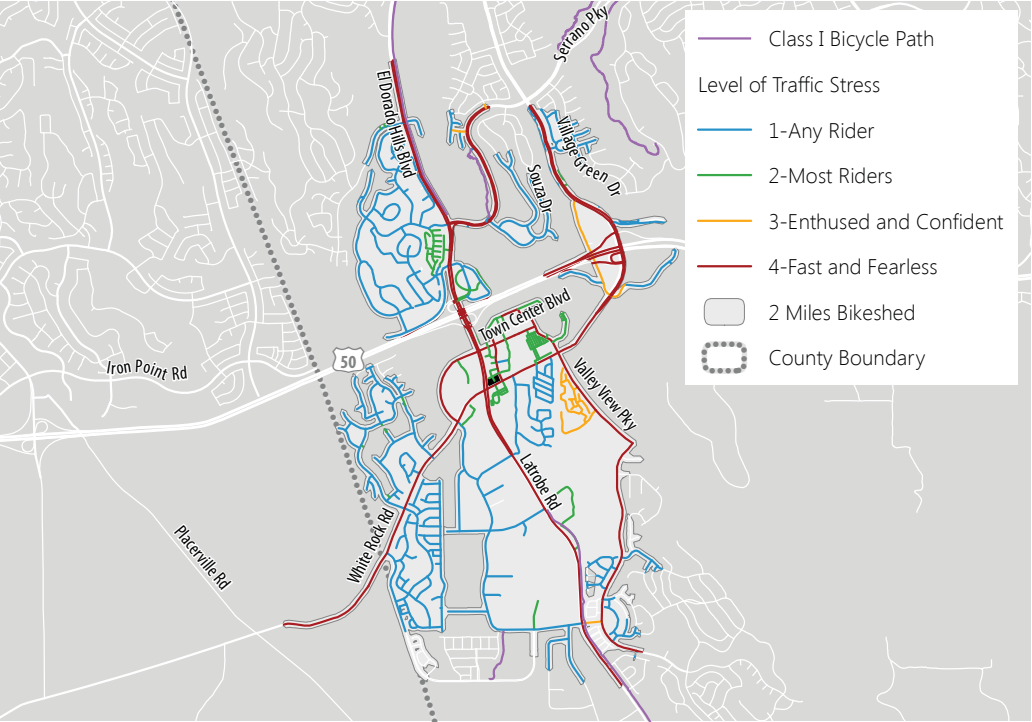
Site Location

Biking  
1 mile and 2 mile areas



## Level of Traffic Stress (LTS)

How comfortable a person is likely to feel biking on a street



Site Characteristics - 1.9 Acres

## Top Strengths & Weaknesses of Site

### Site Strengths

- Site visibility
- Proximity to public spaces
- Limited site constraints (environmental and terrain)

### Site Weaknesses

- Parcel size
- Existing and future parking demand cannot be accommodated without parking garage
- Overhead power lines present

## Residential & Employment Density (2036)

	1 Mile	2 Miles	5 Miles
Households Per acre	1.38	1.46	1.00
Jobs Per acre	4.54	2.11	0.92

## Directness of Transit

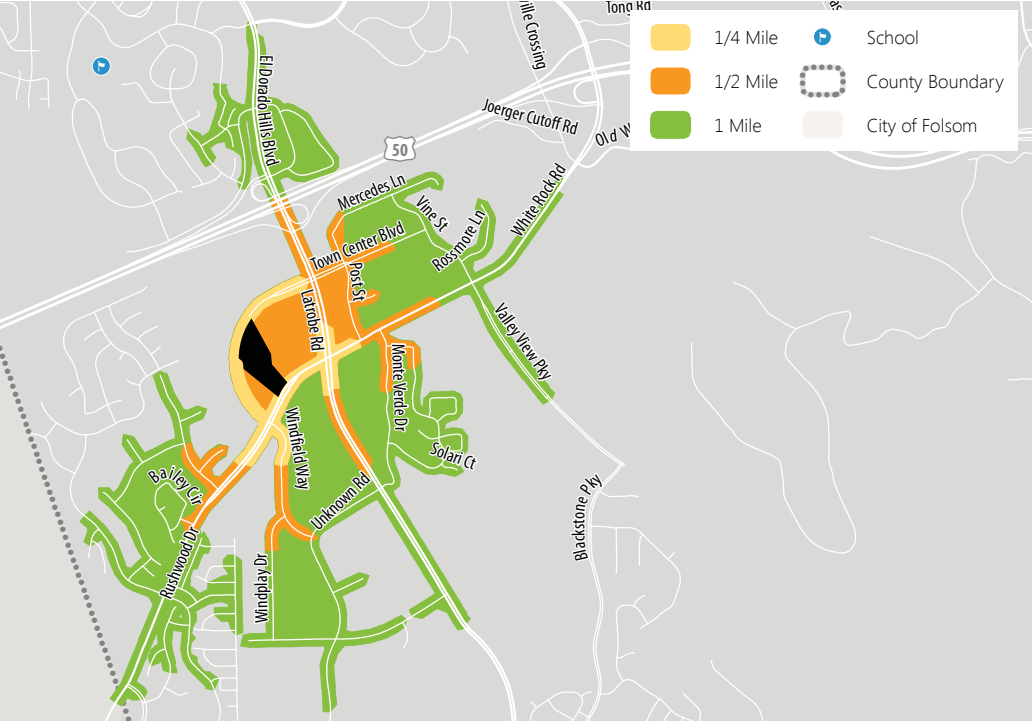


County Line Multi-Modal Transit Center Study

# Travel Shed

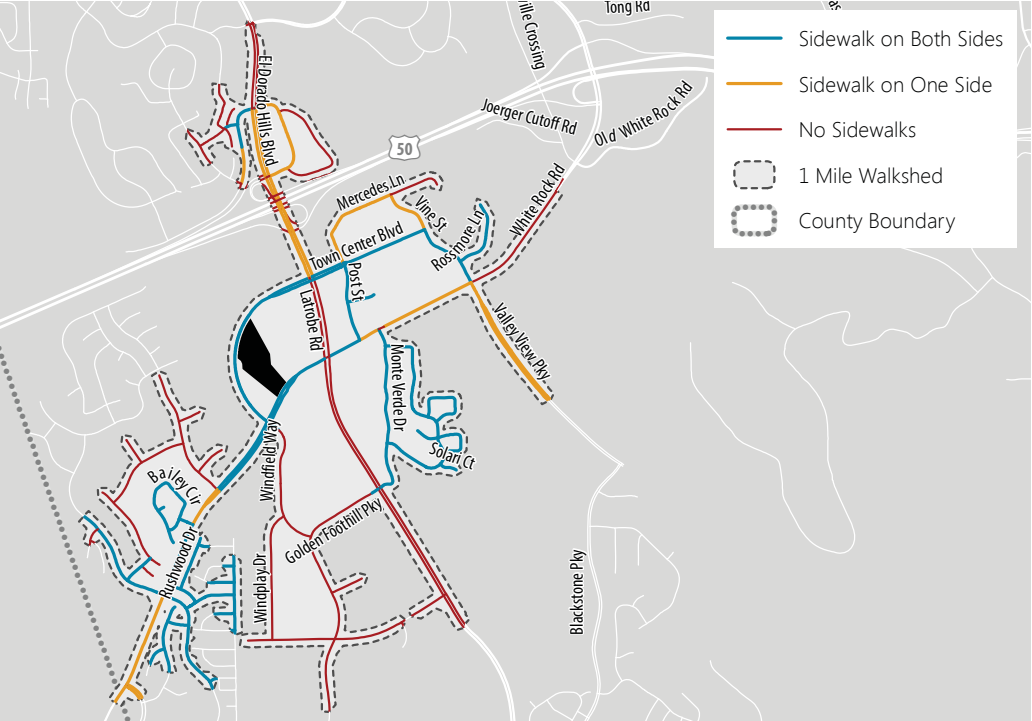
Distance the average person is willing to walk or bike

Walking  
1/4 mi, 1/2 mi, 1 mi areas



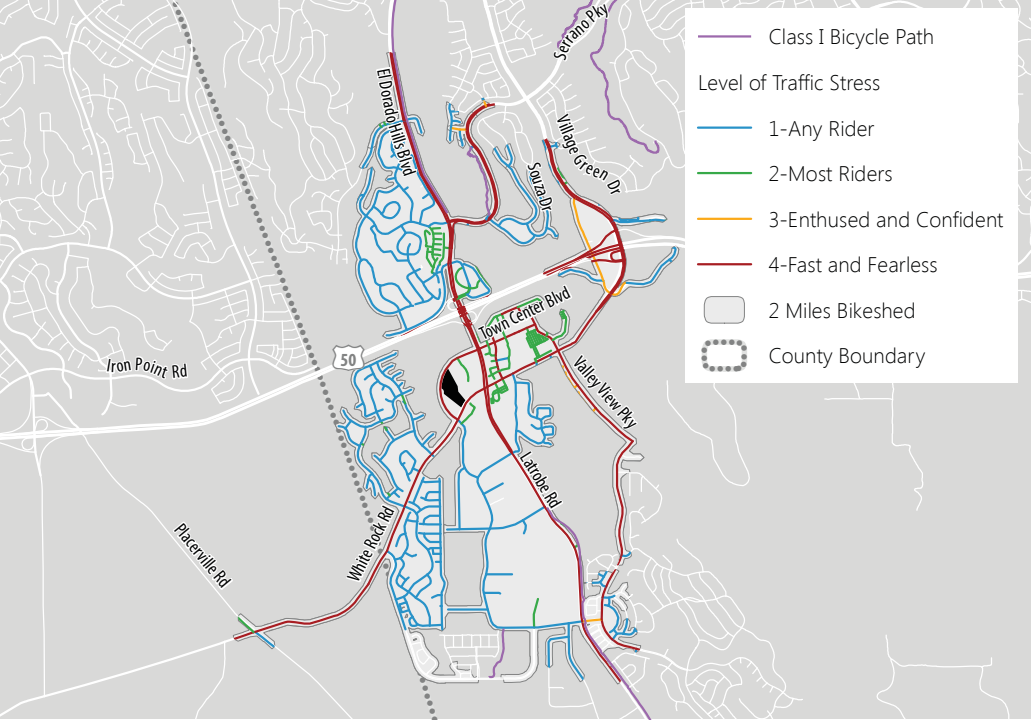
# Sidewalk Gaps

Identified within the walkshed area

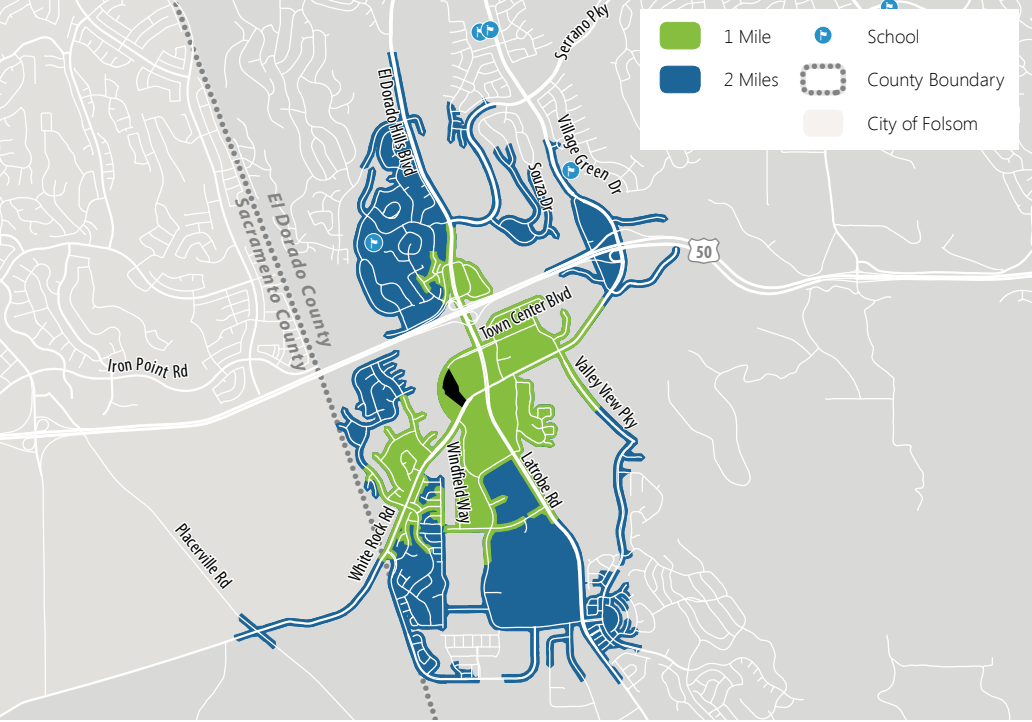


# Level of Traffic Stress (LTS)

How comfortable a person is likely to feel biking on a street



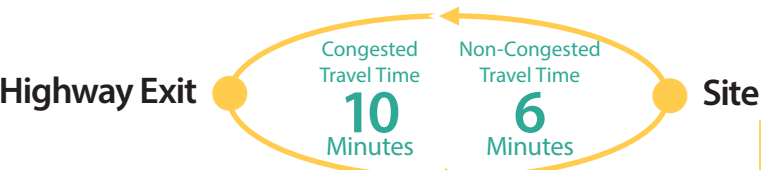
Biking  
1 mile and 2 mile areas



# Residential & Employment Density (2036)

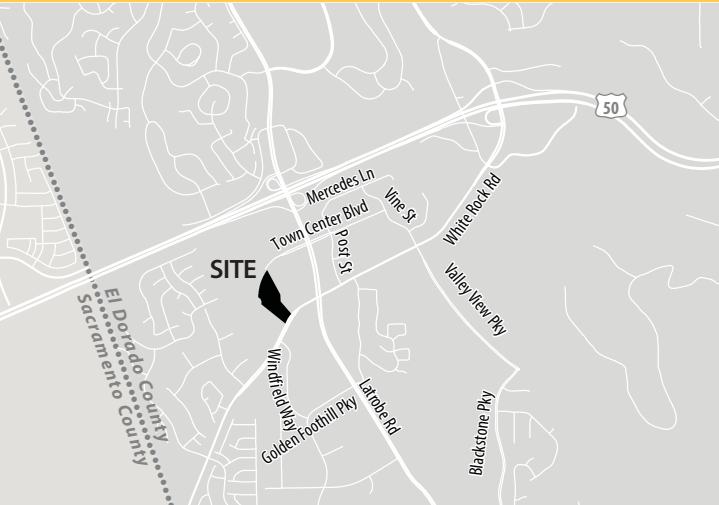
	1 Mile	2 Miles	5 Miles
Households Per acre	1.73	1.55	1.00
Jobs Per acre	4.63	2.16	0.99

# Directness of Transit

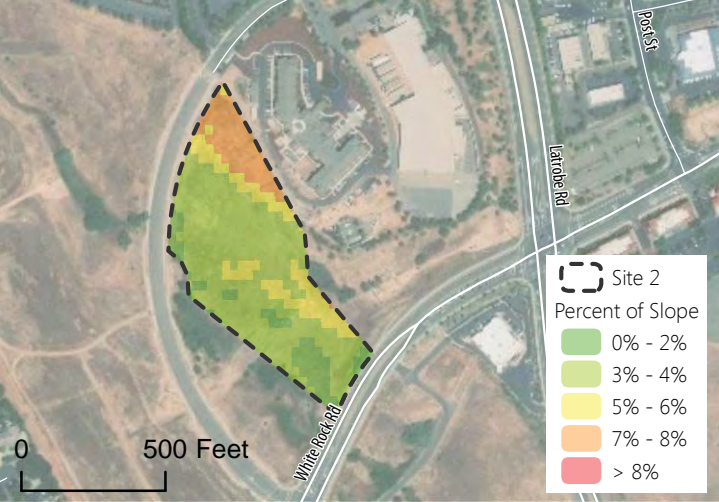


## TRANSIT CENTER SITE OPTION 2

# White Rock Road & Town Center Blvd



Site Location



Site Characteristics - 6.5 Acres

# Top Strengths & Weaknesses of Site

## Site Strengths

- High residential density
- Pedestrian comfort/ accessibility
- Site visibility

## Site Weaknesses

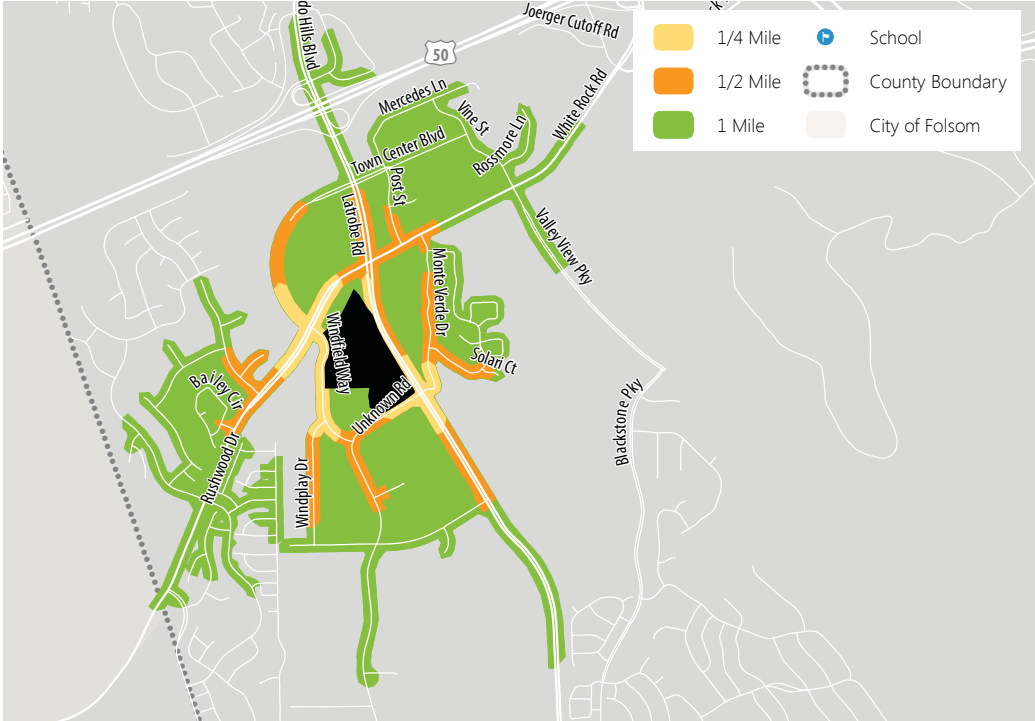
- Located away from major retail
- Zoning amendment may be required
- Indirect route to US 50

County Line Multi-Modal Transit Center Study

# Travel Shed

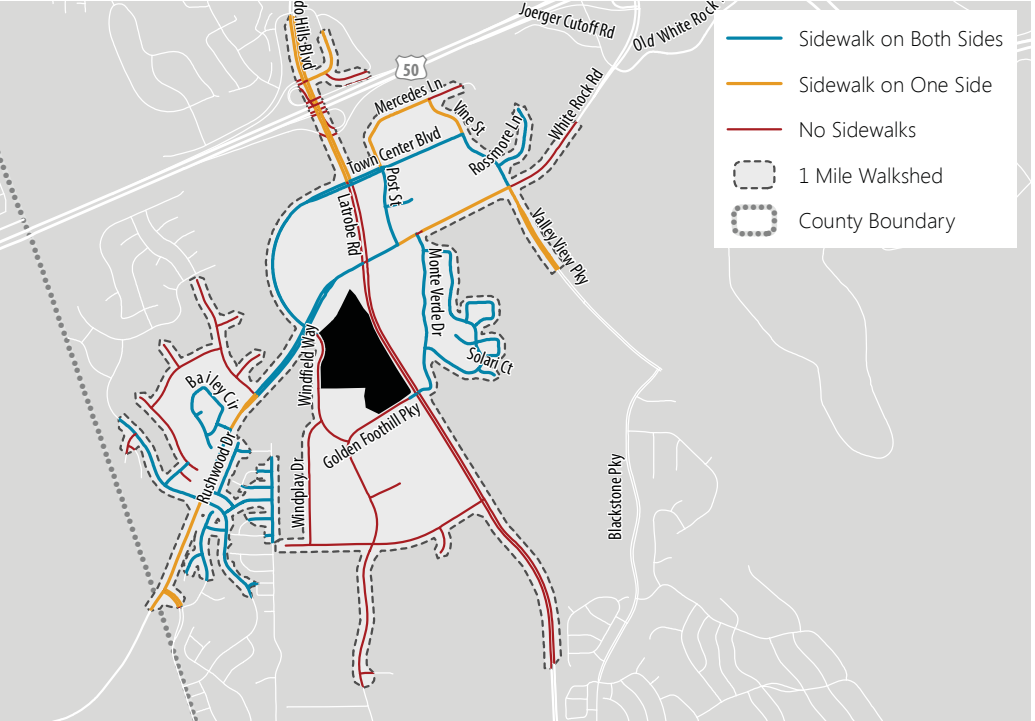
Distance the average person is willing to walk or bike

Walking  
1/4 mi, 1/2 mi, 1 mi areas



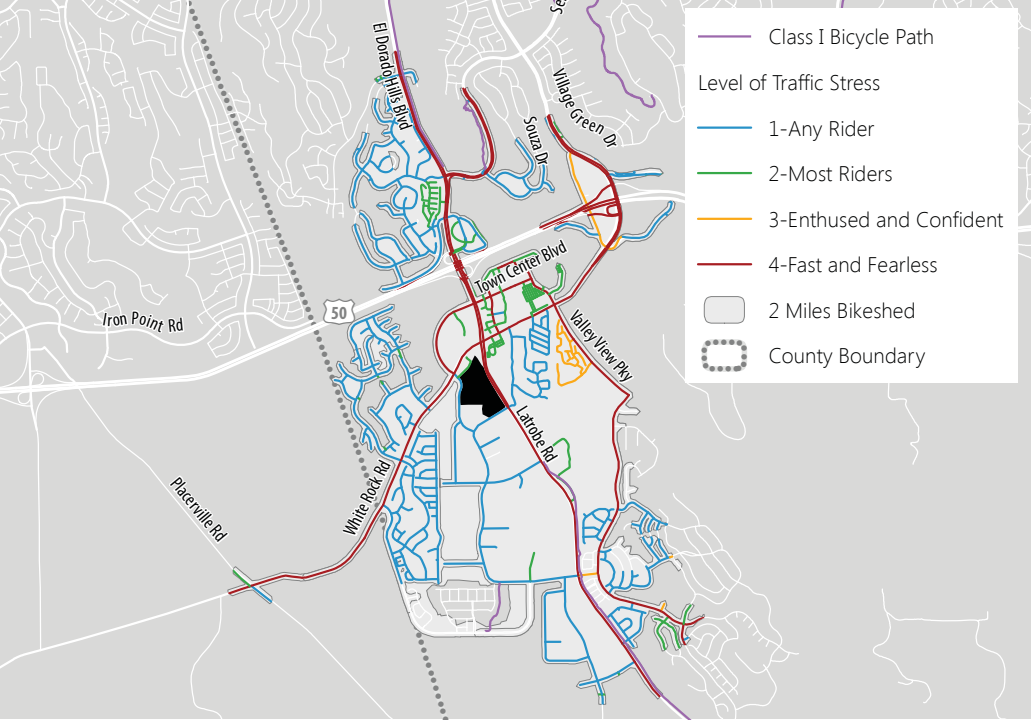
# Sidewalk Gaps

Identified within the walkshed area

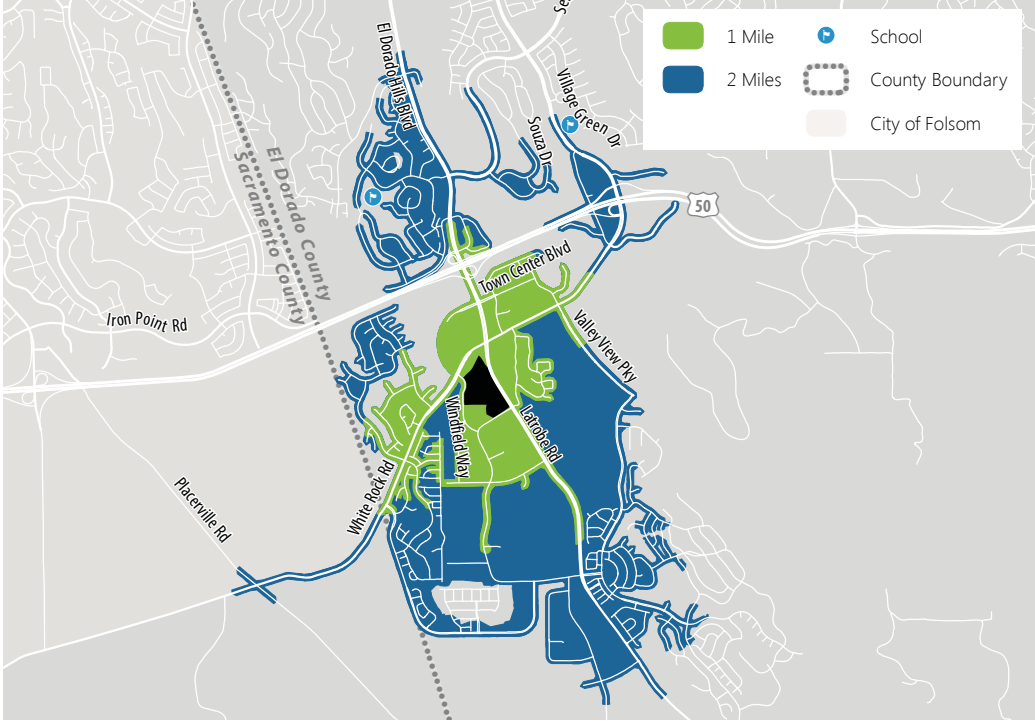


# Level of Traffic Stress (LTS)

How comfortable a person is likely to feel biking on a street



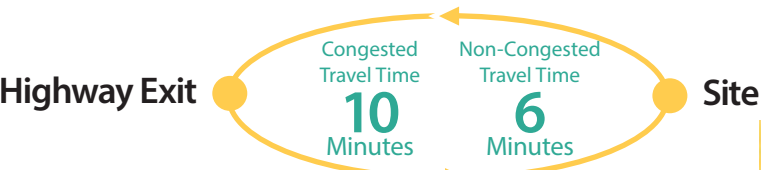
Biking  
1 mile and 2 mile areas



# Residential & Employment Density (2036)

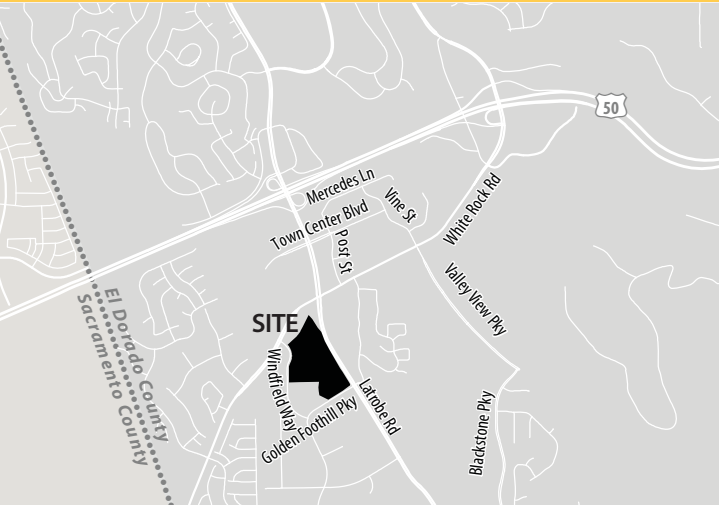
	1 Mile	2 Miles	5 Miles
Households Per acre	1.44	1.44	0.96
Jobs Per acre	5.31	2.10	0.91

# Directness of Transit

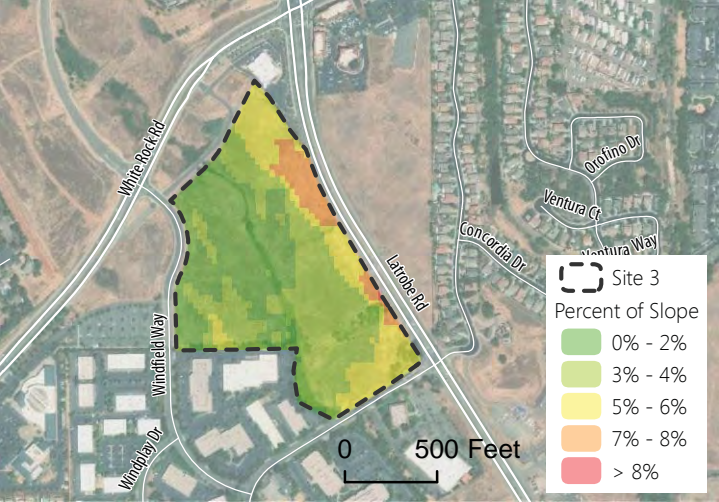


## TRANSIT CENTER SITE OPTION 3

# Latrobe Road & Golden Foothill Pkwy



Site Location



Site Characteristics - 28 Acres

# Top Strengths & Weaknesses of Site

## Site Strengths

- Minimal turns and left turns required to access site
- High employment density
- Opportunity for TOD and other transit supportive uses on adjacent parcels

## Site Weaknesses

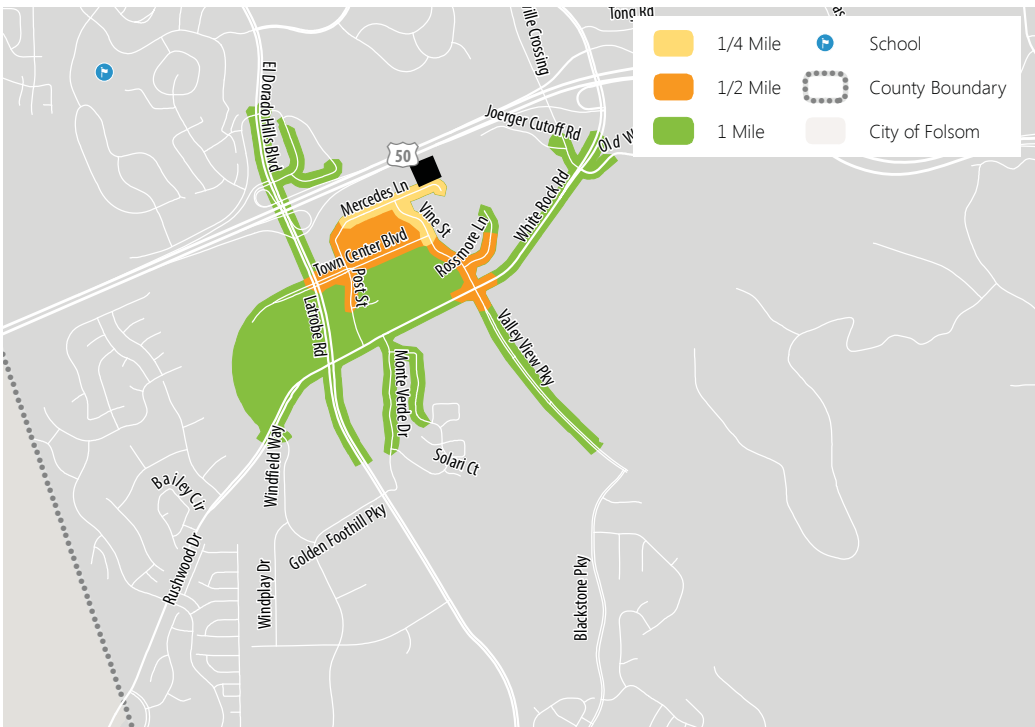
- Potential site constraints (environmental)
- No existing infrastructure
- Pedestrians have to cross two major streets to access retail/services

County Line Multi-Modal Transit Center Study

# Travel Shed

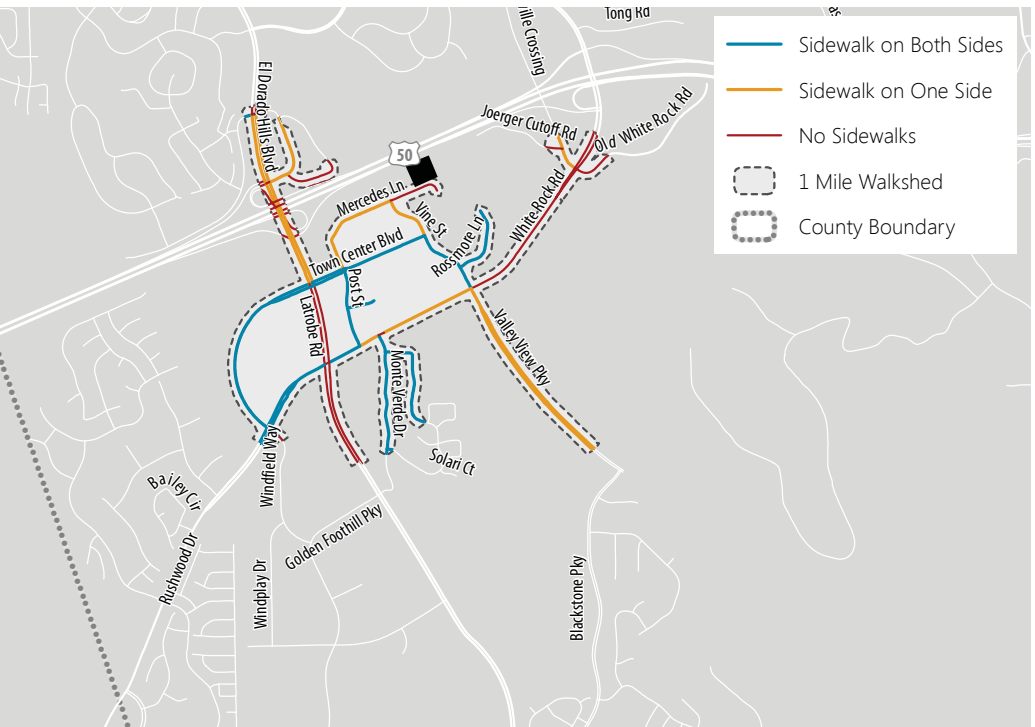
Distance the average person is willing to walk or bike

Walking  
1/4 mi, 1/2 mi, 1 mi areas



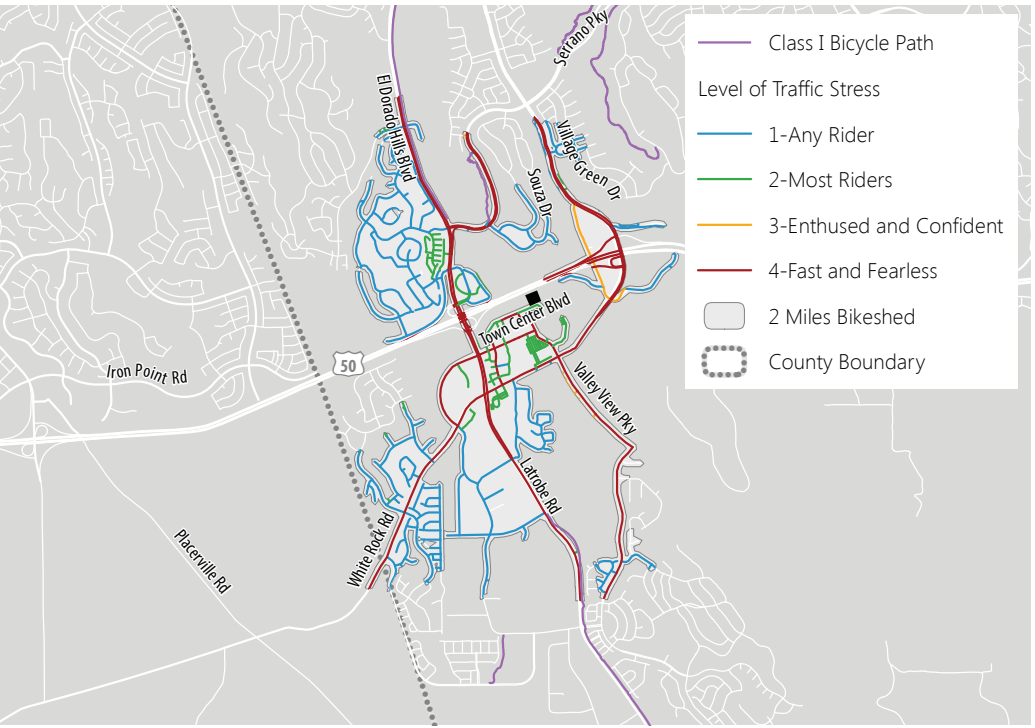
# Sidewalk Gaps

Identified within the walkshed area

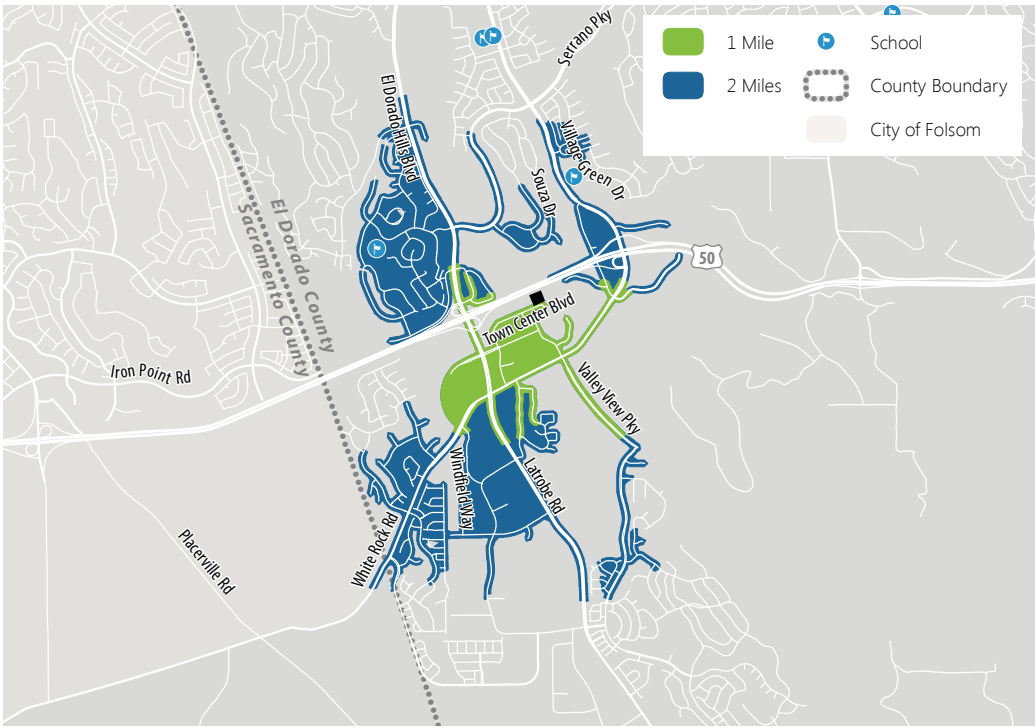


# Level of Traffic Stress (LTS)

How comfortable a person is likely to feel biking on a street



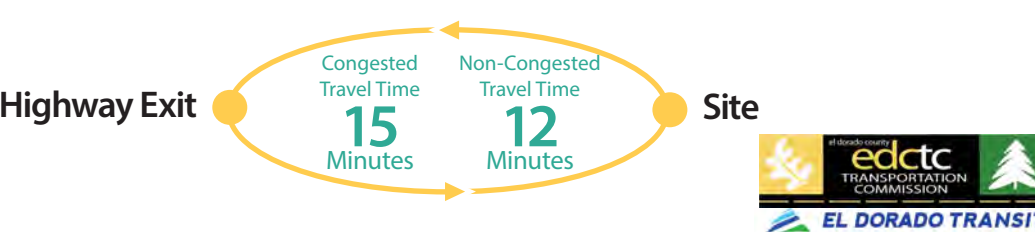
Biking  
1 mile and 2 mile areas



# Residential & Employment Density (2036)

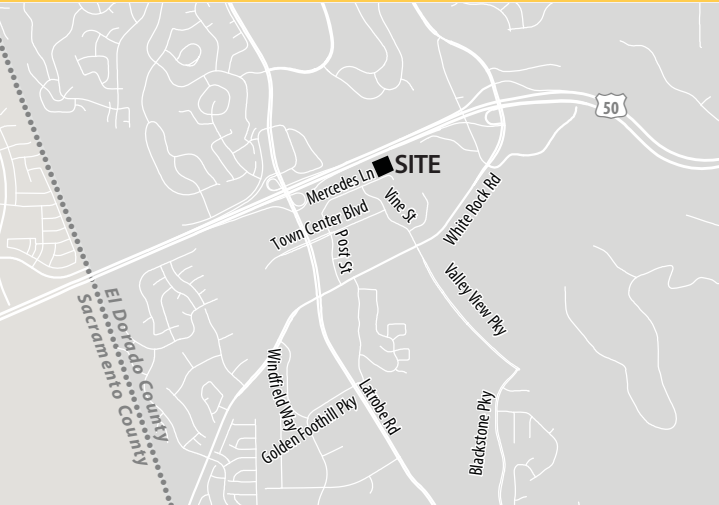
	1 Mile	2 Miles	5 Miles
Households Per acre	1.29	1.33	1.04
Jobs Per acre	2.81	1.94	0.91

# Directness of Transit

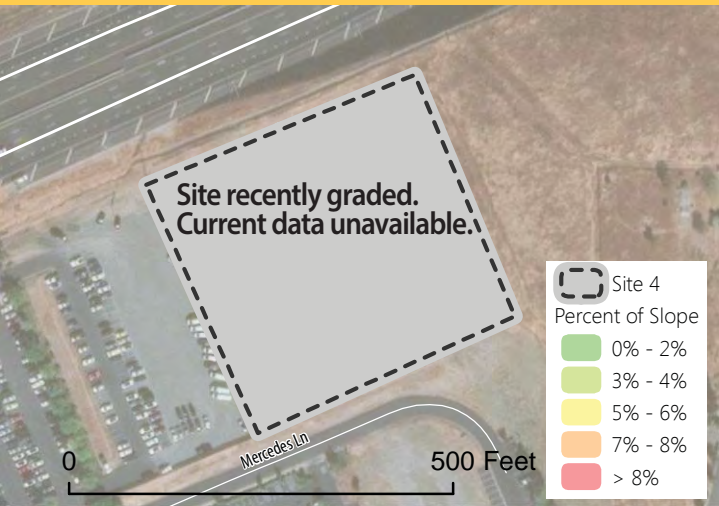


## TRANSIT CENTER SITE OPTION 4

# Mercedes Lane & Vine Street



Site Location



Site Characteristics - 3.5 Acres

# Top Strengths & Weaknesses of Site

## Site Strengths

- Proximity to public spaces
- Limited site constraints (environmental and terrain)
- Proximity to multi-family housing

## Site Weaknesses

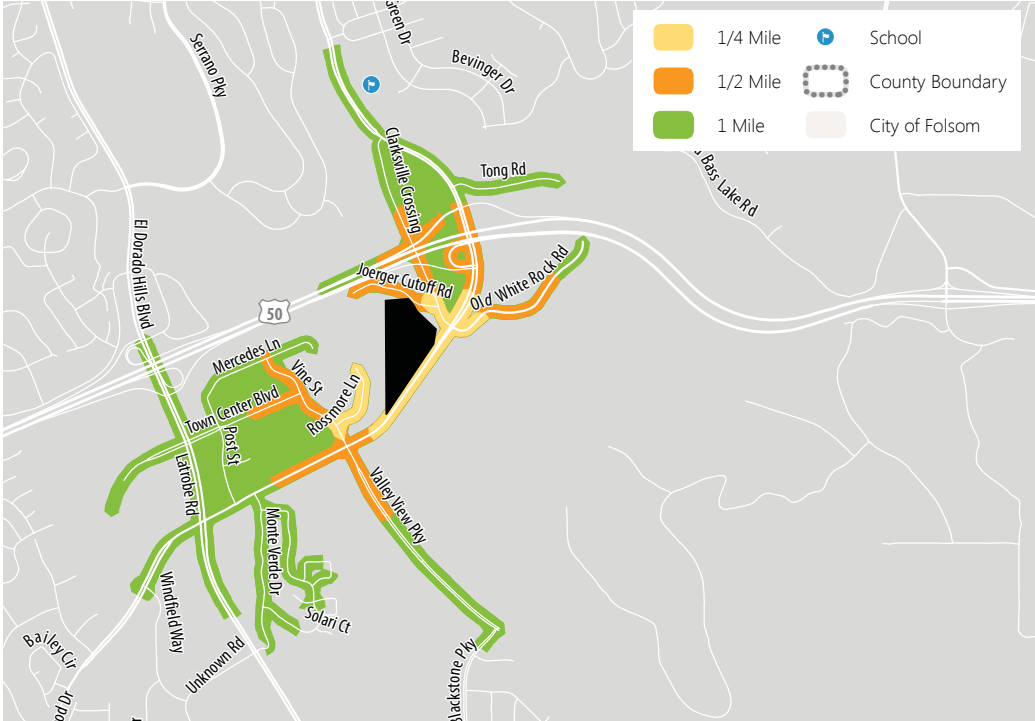
- Difficult to access from US 50 and future Southeast Connector
- Limited potential for connection to other transit
- Smaller site

County Line Multi-Modal Transit Center Study

# Travel Shed

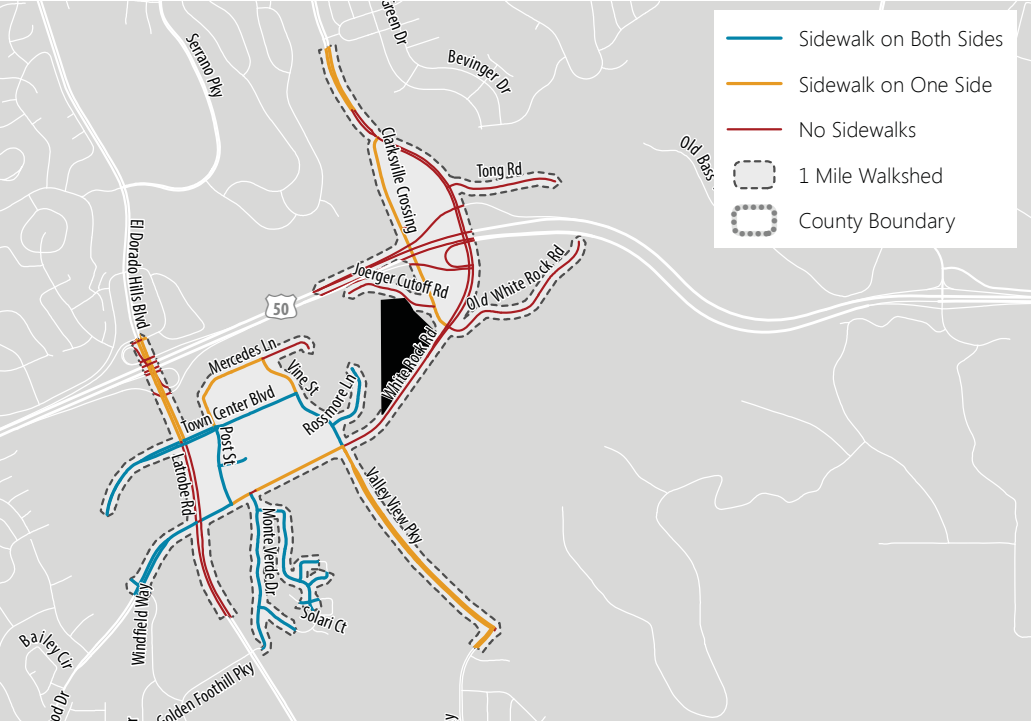
Distance the average person is willing to walk or bike

Walking  
1/4 mi, 1/2 mi, 1 mi areas



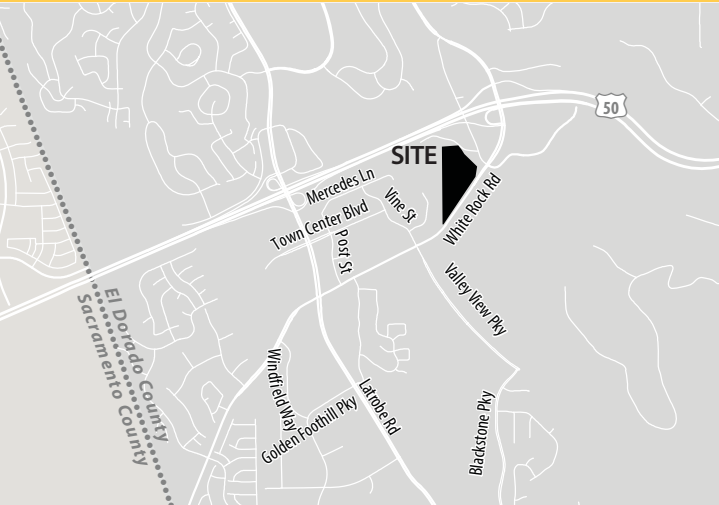
# Sidewalk Gaps

Identified within the walkshed area



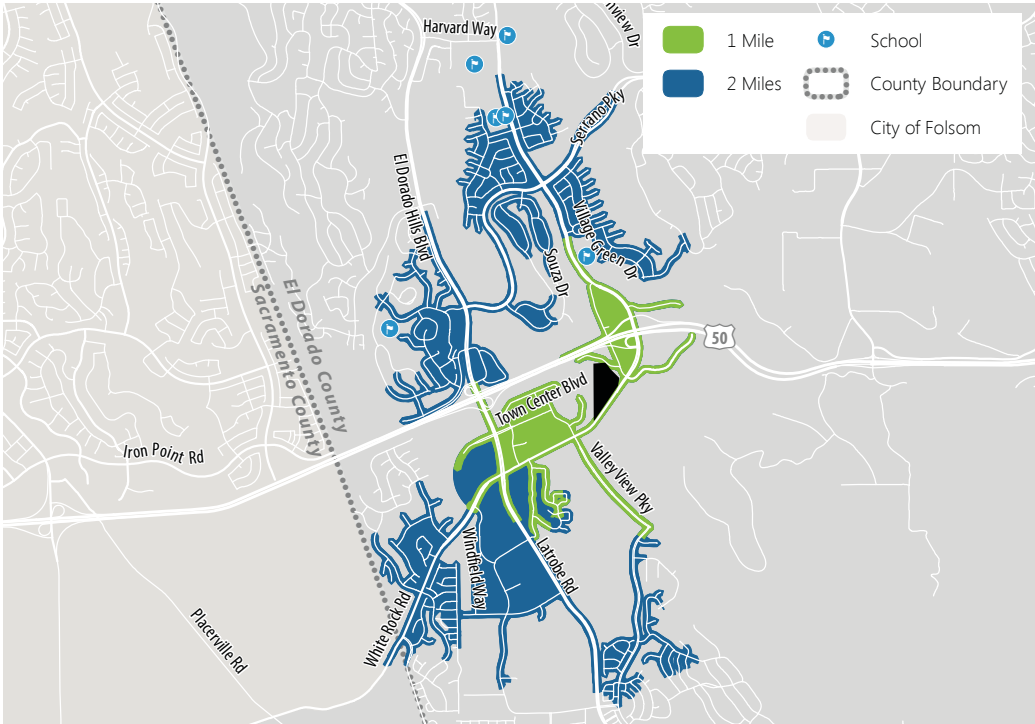
TRANSIT CENTER SITE OPTION 5

# White Rock Road & Clarksville Crossing



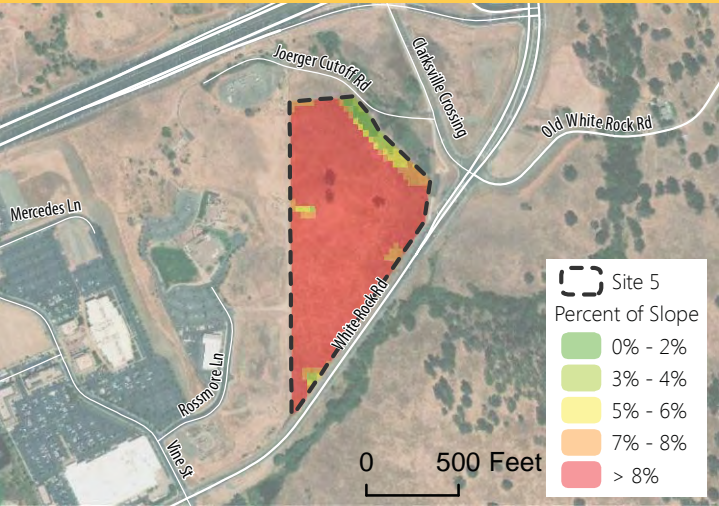
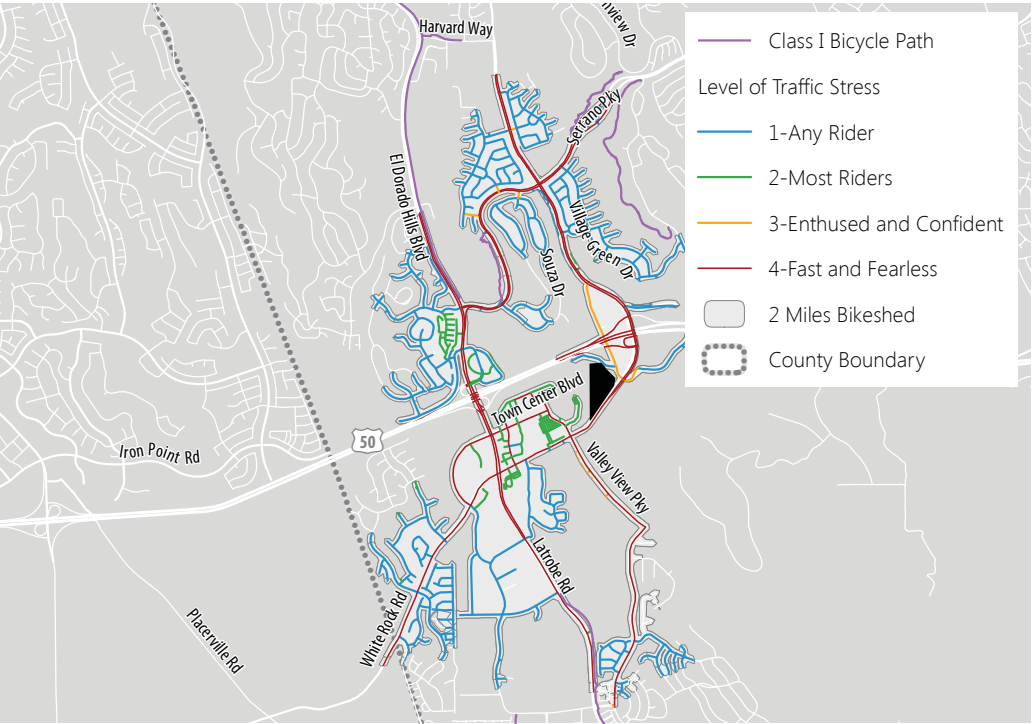
Site Location

Biking  
1 mi, 2 mi, 5 mi areas



# Level of Traffic Stress (LTS)

How comfortable a person is likely to feel biking on a street



Site Characteristics - 24 Acres

# Top Strengths & Weaknesses of Site

## Site Strengths

- Easy access from US 50 and future Southeast Connector
- Consistent with zoning - permitted by right
- Good frontage loading potential

## Site Weaknesses

- Low residential and employment density
- Site constraints (environmental and terrain)
- Located away from convenience retail

# Residential & Employment Density (2036)

	1 Mile	2 Miles	5 Miles
Households Per acre	1.04	1.17	0.99
Jobs Per acre	2.36	1.81	0.93

# Directness of Transit

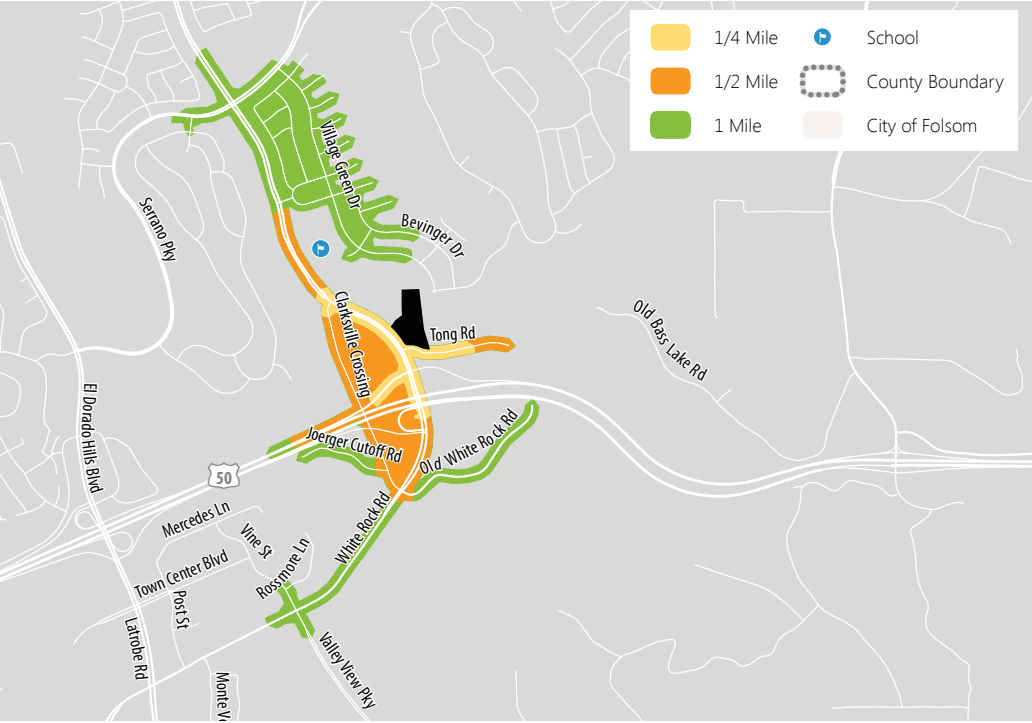


County Line Multi-Modal Transit Center Study

Travel Shed

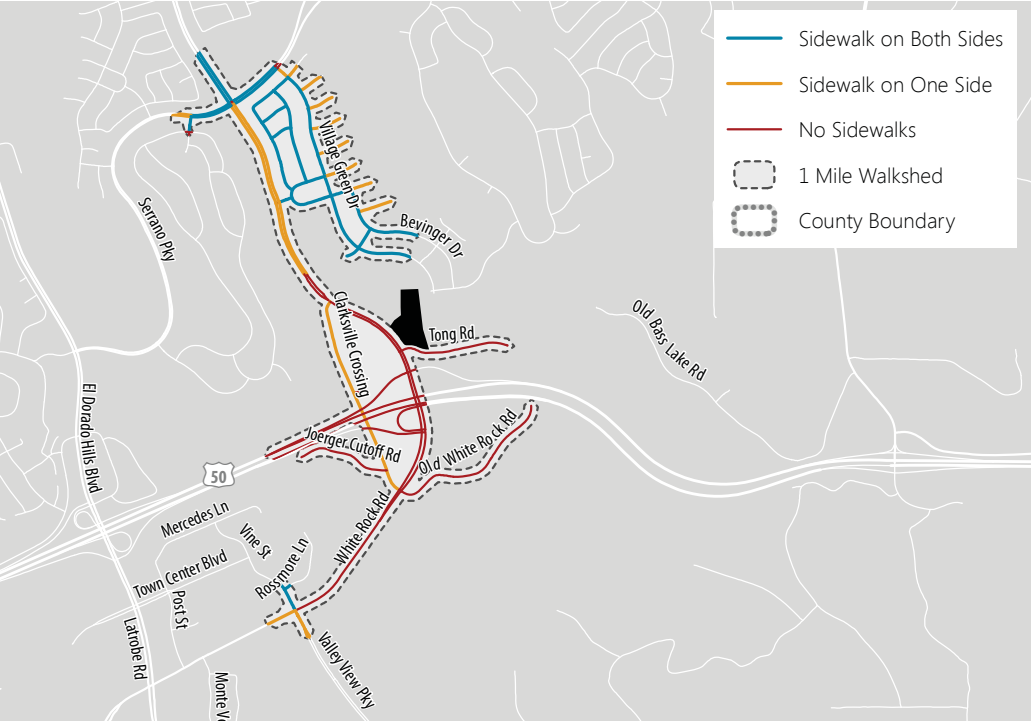
Distance the average person is willing to walk or bike

Walking  
1/4 mi, 1/2 mi, 1 mi areas



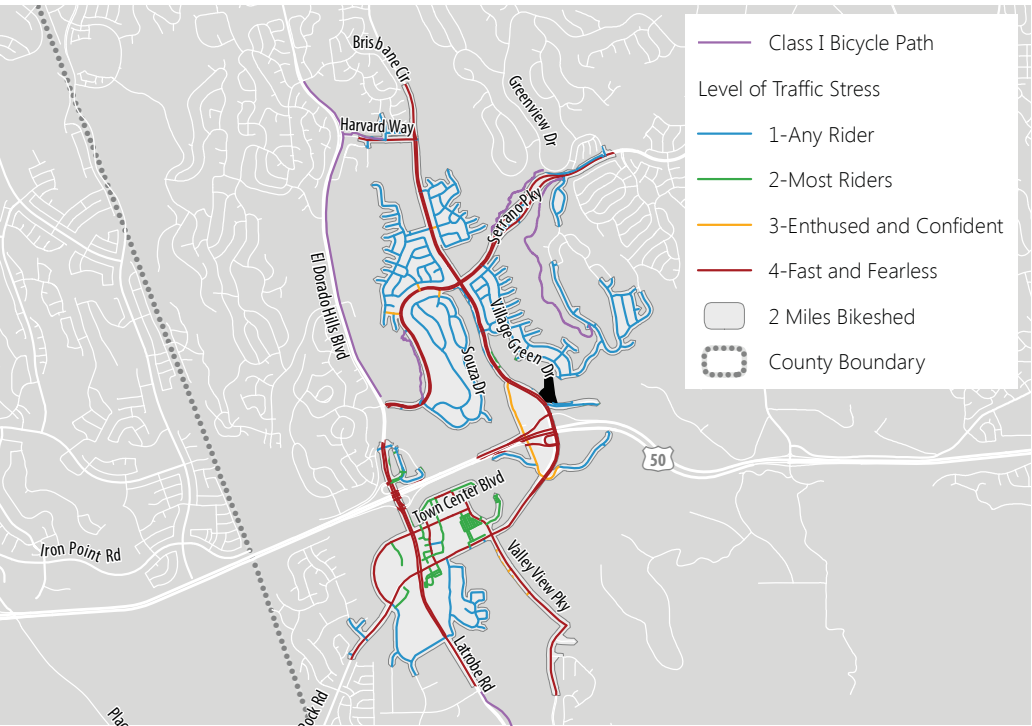
Sidewalk Gaps

Identified within the walkshed area

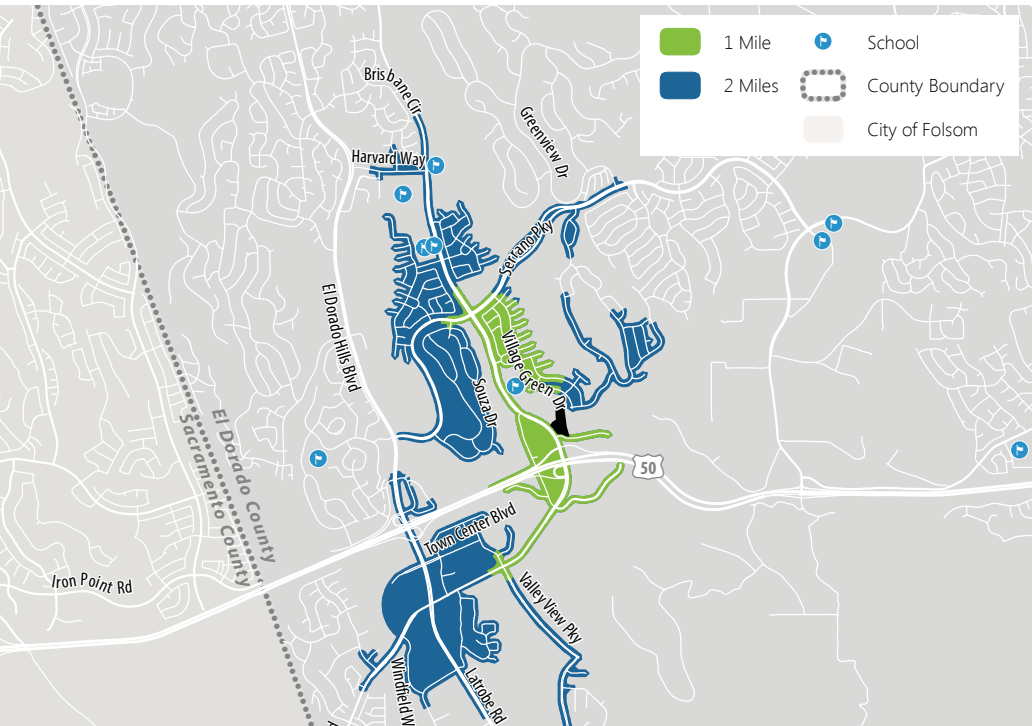


Level of Traffic Stress (LTS)

How comfortable a person is likely to feel biking on a street



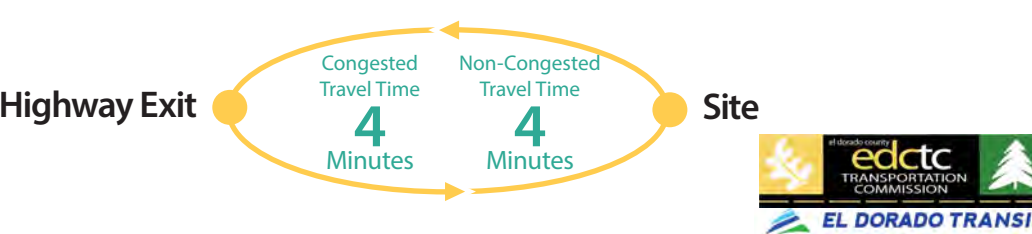
Biking  
1 mi, 2 mi, 5 mi areas



Residential & Employment Density (2036)

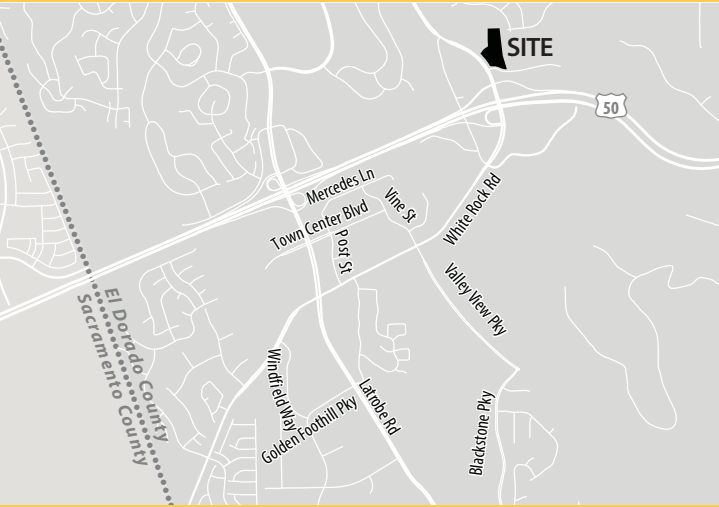
	1 Mile	2 Miles	5 Miles
Households Per acre	1.15	1.10	1.01
Jobs Per acre	1.29	1.27	0.93

Directness of Transit

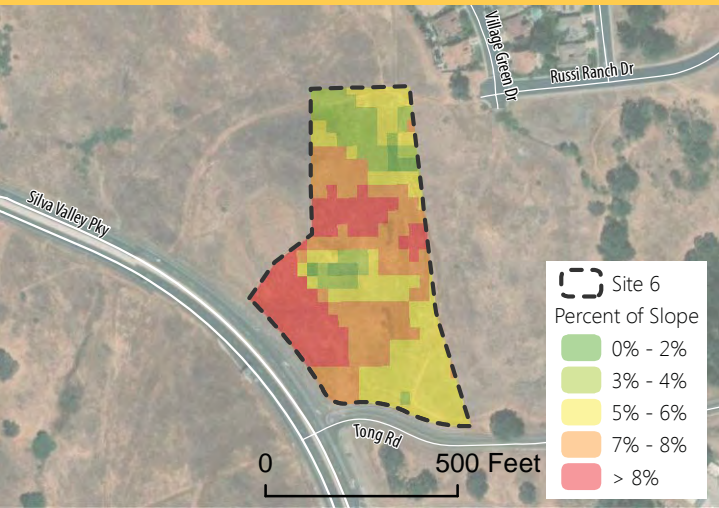


TRANSIT CENTER SITE OPTION 6

Silva Valley Pkwy & Tong Road



Site Location



Site Characteristics - 9 Acres

Top Strengths & Weaknesses of Site

Site Strengths

- Minimal turns and left turns required to access site
- Proximity to future major retail
- Proximity to future convenience retail

Site Weaknesses

- Low residential and employment density
- Poor site visibility and bicycle/pedestrian accessibility
- Site constraints (terrain)

# Community Benefits

## VMT reduction from the Mobility Hub

The mobility hub provides an opportunity to reduce vehicle miles traveled (VMT) in a variety of ways, including but not limited to:

- Accommodating existing and future demand by providing adequate parking and additional bus services, in particular commuter bus services;
- Accommodating a currently unmet demand for individuals commuting from Rancho Cordova to El Dorado Hills; and,
- Providing an opportunity for residents that live within close proximity of the mobility hub to walk or bike to the hub to utilize transit services, rather than drive;

In order to calculate potential VMT reduction from these sources, we used the Sacramento Area Council of Governments (SACOG) SACSIM Travel Demand Model developed for the 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). The model was used to calculate household and employment density within a one-, two-, and five-mile radius of each project site evaluated. VMT reduction will vary slightly depending on which site is selected; however, we analyzed potential VMT reduction assuming Site 3 is selected to provide an example estimate.

The existing park and ride lot is currently overcapacity. To accurately estimate the future potential VMT reduction from existing and future residents that may desire to use transit to commute out of El Dorado Hills, we determined how many potential transit users are within a five-mile radius of Site 3 and commute to Central City Sacramento. Commute trips to Central City Sacramento were calculated as that is currently the primary commute bus service offered and has an opportunity to significantly reduce VMT. It is important to note that VMT could be further reduced if additional commute services were provided to areas outside of Central City Sacramento, along the Capital Southeast Connector Corridor to Elk Grove for example.

Table 4 provides the estimated daily VMT reduction calculation. As shown, approximately 219 residents within a five-mile radius will commute to Central City Sacramento by 2036, resulting in a potential VMT reduction of 12,045 miles.

Table 4 – VMT Reduction Attributed to Increased Capacity – Residents within a 5-mile radius of Mobility Hub							
Year	Household Density per Acre	Total Acres	Total Employed Residents <sup>1</sup>	Employed Residents that use Transit <sup>2</sup>	Commute Trips From EDH to Central City Sacramento <sup>3</sup>	Average VMT to/from Mobility Hub	Total VMT Reduction
2012	0.59	50,000	33,925	2.2%	134	55	7,370
2036	0.96		55,200		219		12,045
<sup>1</sup> Total Employed Residents was calculated using an average of 1.15 workers per household. This was based on El Dorado County's average number of workers per household reported in the 2013-2017 American Community Survey 5-Year Estimates Table S0501.							
<sup>2</sup> Source: 2013-2017 American Community Survey 5-Year Estimates Table S0801 for El Dorado Hills CDP.							
<sup>3</sup> Pending validation from the SACOG Regional Household Travel Survey (2019)							

By 2036, there will be approximately 45,500 jobs within a five-mile radius of the Site 3, indicating a need for commute services into El Dorado Hills. Data revealed approximately 56% of existing commute trips into El Dorado Hills come from Rancho Cordova and nearby communities. Most of these commuters likely drive as it is the quickest mode of travel. For example, it takes approximately 16-24 minutes to get from Mather Field Mills Station in Rancho Cordova to Site 3 by automobile and approximately one hour and 25 minutes to one hour and 55 minutes to get there by transit (Google Maps). The transit travel time includes time on light rail and local bus services, which are both necessary in order to travel between the two locations, as well transfer wait time between the services.

However, if existing El Dorado Transit commuter buses making trips to Central City Sacramento added a stop in Rancho Cordova on the return trip to El Dorado Hills, transit travel time could be reduced to approximately 20-45 minutes, which is closer to the time it takes to make the trip by automobile. This would make travel by transit a more attractive option and VMT could be reduced by an additional 7,645 miles by 2036. Table 5 provides the calculation for VMT reduction with a reverse commute transit option. It is important to note that additional services such as bike share, micro-transit, shuttles, or TNC's may be required to provide transportation from the mobility hub to the job site.

Table 5 – VMT Reduction Attributed to Reverse Commute Services – Jobs within a 5-mile radius of Mobility Hub											
Year	Jobs/ Acre	Total Acres	Total Jobs	Jobs Occupied by EDH Residents <sup>1</sup>	Jobs Occupied by Non- EDH Residents	Transit Trips from Non-EDH Residents <sup>2</sup>	Commute Trips From CCS to EDH <sup>3</sup>	Commute Trips From RC to EDH <sup>3</sup>	Total Reverse Commute Trips	Average VMT to/From Mobility Hub	Total VMT Reduction
2012	0.46	50,000	23,000	6,072	16,928	203	2	114	116	33	3,872
2036	0.91		45,500	12,012	33,488	402	4	225	229		7,645
<sup>1</sup> Approximately 26.4% of residents in El Dorado Hills work in El Dorado Hills based on the 2013-2017 American Community Survey 5-Year Estimates Table S0801.											
<sup>2</sup> Transit trips were calculated using the travel data collected for the SACOG Regional Household Travel Survey, which indicated approximately 1.2% of residents within the SACOG region use transit.											
<sup>3</sup> Pending validation from the SACOG Regional Household Travel Survey (2019)											

VMT could be further reduced if pedestrian and bicycle infrastructure within at minimum, a two-mile radius of the mobility hub was enhanced. This would allow residents that live within a two-mile radius of

the site to walk or bike to transit services. This would also allow individuals that commute to El Dorado Hills and work within a two-mile radius of the site to walk or bike to their employment center, if a reverse commute transit service were provided. Tables 6 and 7 provide the estimated VMT reduction that may occur as a result of improved pedestrian and bicycle infrastructure. As shown, pedestrian and bicycle improvements could result in a total daily VMT reduction 350 miles.

Table 6 – VMT Reduction Attributed to Improved Pedestrian and Bicycle Infrastructure in El Dorado Hills – Residents within a 2-mile radius of Mobility Hub							
Year	Household Density per Acre	Total Acres	Total Employed Residents <sup>1</sup>	Employed Residents that use Transit <sup>2</sup>	Commute Trips From EDH to Central City Sacramento <sup>3</sup>	Average VMT to/from Mobility Hub	Total VMT Reduction
2012	0.57	8,000	5,244	2.2%	21	3.5	74
2036	1.44		12,248		52		182

<sup>1</sup> Total Employed Residents was calculated using an average of 1.15 workers per household. This was derived using El Dorado County's average number of workers per household based on the 2013-2017 American Community Survey 5-Year Estimates Table S0501.

<sup>2</sup> Source: 2013-2017 American Community Survey 5-Year Estimates Table S0801 for El Dorado Hills CDP.

<sup>3</sup> Pending validation from the SACOG Regional Household Travel Survey (2019)

Table 7 – VMT Reduction Attributed to Improved Pedestrian and Bicycle Infrastructure in El Dorado Hills – Jobs within a 2-mile radius of Mobility Hub											
Year	Jobs/ Acre	Total Acres	Total Jobs	Jobs Occupied by EDH Residents <sup>1</sup>	Jobs Occupied by Non-EDH Residents	Transit Trips from Non-EDH Residents <sup>2</sup>	Commute Trips From CCS to EDH <sup>3</sup>	Commute Trips From RC to EDH <sup>3</sup>	Total Reverse Commute Trips	Average VMT to/From Mobility Hub	Total VMT Reduction
2012	0.88	8,000	7,040	1,859	5,181	62	1	35	36	2	72
2036	2.10		16,800	4,435	12,365	148	1	83	84		168

<sup>1</sup> Approximately 26.4% of residents in El Dorado Hills work in El Dorado Hills based on the 2013-2017 American Community Survey 5-Year Estimates Table S0801.

<sup>2</sup> Transit trips were calculated using the travel data collected for the SACOG Regional Household Travel Survey, which indicated approximately 1.2% of residents within the SACOG region use transit.

<sup>3</sup> Pending validation from the SACOG Regional Household Travel Survey (2019)

## Environmental Benefits based on Low Impact Development Techniques

Beyond reducing regional air quality impacts by reducing vehicles miles traveled (VMT), El Dorado Transit has the ability to lessen other environmental impacts with potential design and construction techniques of the Transit Center. The following section will focus on specific opportunities for the design and construction of the Transit Center that promote good stewardship of the environment.

These sustainability guidelines include four topic areas; pavement, drainage, electrical and landscaping. These areas include the major construction elements of the parking lot facility.

### ***Pavement***

The Transit Center project may consider using recycled material for its pavement sections. There are numerous construction demolition recyclers in the Sacramento Region that could provide recycled aggregate and rubberized asphalt at a competitive cost compared to virgin material. Caltrans Specifications exist for the design and construction of rubberized asphalt utilizing either a wet or dry process. Rubberized asphalt can create a smoother, longer lasting pavement for the park and ride lot.

Cool pavement technologies may be explored for application within the park and ride lot since roughly 75% of the project site will be paved. Using cool pavements can help create a location that is more hospitable to people waiting for buses or returning to their vehicles in the very warm summers. Light colored concrete in pedestrian areas in conjunction with either permeable pavement or asphalt with light aggregate can help reduce the heat island effect of the site. Future maintenance activities within paved areas should be planned so that they do not decrease the solar reflectivity of the site. Rubberized asphalt tends to be blacker than conventional pavement and there may be trade-offs required against the heat island effects depending on community priorities.

Existing low traffic volumes make the Transit Center an ideal location for the use of permeable pavement in the parking areas. Additionally, the topography of many of the sites lends itself to a cost-effective application of a thicker pavement section that is required by Porous Asphalt or Pervious Concrete. The parking areas are ideal for the application of permeable pavement due to the low volume of traffic and smaller design vehicle. Bus lanes and bus loading areas will need to be evaluated for the sufficiency of pervious concrete based on the increased loading of the buses. A combination system of permeable pavement and impervious pavement may need to be applied. If a combination of pervious and impervious pavement is used, consideration should be given to reducing site drainage runoff from impervious areas. A permeable pavement section will create increased storm water storage to minimize any potential need for an overflow system connecting into the area's storm drain system.

### ***Drainage***

The County requires water quality and reduction of storm water runoff from impermeable areas be considered. Bio remediation and hydromodification are two accepted techniques to mitigate site runoff and reduce water quality impacts from a project site. Bio filtration methods are space saving and cost-effective alternatives to underground mechanical treatment vaults and provide aesthetic benefits to the project while helping to improve the quality of storm water runoff entering municipal systems. There are

several bio filtration technologies which include vegetative swales, vegetative filter strips, and bio retention basins.

### ***Electrical***

The Transit Center lighting design should be carefully considered and selection of efficient fixtures using efficacious sources will reduce lighting power and illumination intensity. Efficient outdoor lighting is prescribed in the building code and energy efficient luminaries such as LED will reduce short- and long-term energy costs for the Transit Center. Many energy efficient lights have longer life spans than traditional lights and will need to be replaced less often, saving on both parts and maintenance costs. Another important design decision is the lighting fixture design and layout. The site needs to be properly lit, but not create undue light pollution on surrounding neighborhoods. This can be accomplished in various ways by using down-lighting, shorter poles, shielded lenses, and motion activated technology.

Solar panels are another possible option for the Transit Center due to the abundant availability of sunlight in western El Dorado County. The project sites typically have long periods of sunlight throughout the day which would allow the design to maximize the amount of energy it can receive from sunlight. Solar panels provide a dual benefit by creating electricity for the various uses on site such as lighting and vehicle charging. They also shade the parking lot and pedestrian areas to increase user comfort.



### ***Landscaping***

Very warm summer temperatures, lack of rainfall, and desiccating winds for eight months of the year create a very challenging climate for establishing plant material. Climate-adapted plants, while still requiring care, have the best chance of survival in the region.

The project should carefully consider the soils, local microclimate, and the intended function of the site when selecting plant material and emphasize native plants, where possible, to support preservation of native habitats. Assessment of the available maintenance resources prior to plant selection will ensure that tasks for plant establishment and long-term care can be performed.

Beyond plant selection the irrigation system should be designed with sustainable principles in mind. Water-efficient irrigation reduces water waste by delivering water to the plant material in sub-surface emitter tubing or low-flow emitter tubes rather than overhead spray and should be used wherever practical. Using this technology increases the amount of water that reaches plant roots and minimizes the occurrence of runoff and overspray. Water-efficient irrigation uses weather-based irrigation controllers that adjust the amount of water applied to plants based on evapotranspiration (ET) levels of the local climate.

# Mobility Hub Tool Box

The Mobility Hub should be designed to accommodate both transit providers and transit riders including those transferring at the Transit Center and those utilizing the Transit Center as their first or last stop. Amenities specific to each of these individuals should be considered and included if appropriate. The following amenities are examples that could be included in the Mobility Hub and would benefit each of these user types.

## Transit Providers

Transit providers include employees of El Dorado Transit such as bus drivers, vehicle maintenance staff, custodial staff (if the mobility hub includes a building and/or restrooms), etc. These users have needs which differ from transit riders as this is their place of work, rather than purely a transit station. Secure employee parking, employee restrooms, office space, and an employee lounge area and/or a break room are examples of amenities that would increase comfort for these individuals and provide a safe, convenient space for employees to rest or relax on lunch, before, after, or in between shifts, or simply if they have downtime (while a bus is receiving maintenance, while they wait for their departure time, etc.). A bus charging station and storage location on-site would also be beneficial as it would reduce the need for drivers to drive further east to store buses at the Missouri Flat Transit Center.

## Transit Riders

### Riders Transferring

Comfort, convenience and travel time are critical factors riders consider when deciding whether to drive or use transit. If a transit service requires a transfer, riders may be deterred as it often increases travel time and is inconvenient. In order to ensure transfers go as smoothly as possible, safe and convenient transfer platforms and shelters, information kiosks and real time route information/screens should be considered. This can help create a comfortable environment for individuals utilizing the Transit Center as a transfer station and could help retain riders.



### Riders Arriving by Automobile



Ensuring there is enough parking to accommodate demand is critical in order to maximize ridership. The type and location of parking should be designed to benefit a variety of users. For instance, the parking lot could have spots designated for car share vehicles, electric vehicles, and parking for carpools or vanpools. Additionally, a quick and efficient pick-up and drop-off area should be included to accommodate individuals being dropped off by family or friends, TNC users, and even autonomous vehicles in the future.

### Riders Arriving by Bicycle

Individuals that access the site by bicycle have two choices when they arrive: bring their bicycle on the bus with them (if the bus can accommodate it) or store the bicycle at the Transit Center. Depending on the individual's destination and whether or not the bus has bike racks, one may desire or be forced to leave their bike at the Transit Center. For this reason, bicycle accommodations should be provided on-site. Bicycle accommodations could be provided via short-term bike racks, or longer-term bike lockers or a bike storage room. Ideally, longer-term bike lockers or a bike storage room would be provided as individuals may be reluctant to leave their bicycle locked on a bike rack for an extended period of time due to security concerns.



Additionally, bike share should be considered at and around the new Transit Center. This will allow individuals that do not feel comfortable leaving their personal bike or do not own a bike to use a bicycle to access the site. This will also provide a first/last mile connection for users that wish to access nearby services and employment centers. E-bike chargers could also be provided for those arriving by e-bike.

### All Users

Additional amenities that should be considered and would benefit all users include an outdoor seating area, indoor waiting area, security (via either patrol and/or cameras), public restrooms, vending machines, or a café, deli, or coffee shop. These amenities can be used by all and can create a true sense of place that can help pass time while waiting for transit services. Creating a comfortable environment is critical in order to increase and retain ridership.



# Public Engagement Summary

## Stakeholder Advisory Committee

On April 5, 2018, El Dorado Transportation Commission (EDCTC) held the first Stakeholder Advisory Committee (SAC) meeting. The meeting took place at the El Dorado Hills Community Services District Pavilion located at 1021 Harvard Drive in El Dorado Hills. Dan Bolster, Senior Transportation Planner at EDCTC, welcomed stakeholders to the kick-off SAC meeting. Adrian Engel, Senior Associate at Fehr & Peers, continued the meeting with an interactive presentation and discussion with stakeholders to provide and discuss a project overview, develop a shared understanding of the existing conditions and plan for the future of the Transit Center.

The second SAC meeting took place on May 30, 2019. The meeting was held at the El Dorado Hills Fire Department located at 1050 Wilson Boulevard in El Dorado Hills. Dan Bolster, Adrian Engel and Brian James, Planning and Marketing Manager at El Dorado Transit, welcomed stakeholders. Similar to the first SAC meeting, Adrian presented an update on the project and discussed next steps.

## Community Workshops

On Thursday, May 17, 2018, in coordination with El Dorado Transit, the El Dorado County Transportation Commission (EDCTC) held a community open house for the El Dorado County Line Multi-Modal Transit Center Study. The open house was held from 4:30 – 6:30 p.m. at the El Dorado Hills Community Services District in the Pavilion, located at 1021 Harvard Way, El Dorado Hills, CA. More than 25 community members signed-in at the community open house. There were five stations around the room that asked for feedback from the community on the context and nature of the future Transit Center. Attendees also submitted comment cards with additional comments related to the Transit Center.



On Tuesday, November 27, 2018, in coordination with El Dorado Transit, the El Dorado County Transportation Commission (EDCTC) held the second community open house for the County Line Multi-Modal Transit Center Study. The open house was held from 4:30 – 6:30 p.m. at Silva Valley Elementary School, located at 3001 Golden Eagle Lane, El Dorado Hills, CA. Sixteen community members signed-in at the community open house. The open house provided community members with an opportunity to learn about the study and potential site locations. The evaluation and site recommendations were on display for the public to comment on.

Summaries of both SAC meetings and the community workshops are provided in Appendix A.

# Implementation and Phasing

Implementation of the Transit Center will need to proceed in two stages. First, the parcel will need to be acquired through a negotiated real estate process, then design and construction of the Transit Center can be coordinated with available funding.

The first stage was initiated on December 6, 2018, when the El Dorado Transit Board authorized the Executive Director to start the real estate acquisition process (see Appendix B – Staff Report). Four property owners were identified for sites 2, 3, 5, and 6, the sites which were categorized as “recommended” or “recommended for consideration”. The Board approved the Executive Director to start preliminary discussions, order preliminary title reports, and begin right of way valuations. Although specific parcels were used for the evaluation process in the previous section of this study, it is important to remember that through the land acquisition process and discussions with property owners, neighboring parcels may be considered for purchase as they have similar value as a mobility hub in El Dorado Hills.

After preliminary discussions have progressed, conceptual designs for the Transit Center will need to proceed to gain a more detailed understanding of the opportunities and constraints of the parcel(s). Detailed survey information including right of way mapping, recorded easements, underground and overhead utility placement, and environmental or geotechnical technical studies will be needed to complete an engineered concept for the Transit Center.

This study contains two potential conceptual layouts for Sites 3 and 5 to enable future discussions with the property owners and to assist with scoping of future phases of engineering work. The layout provided for Site 3 assumes the access restriction on Latrobe Road can be removed or modified and illustrates how the site could be designed to maximize operations. The two site layouts demonstrate the full buildout to accommodate the primary needs of the Transit Center. Depending on available funding, it may be practical to phase the construction of the project as transit demand increases and additional mobility needs of El Dorado Hills are identified. Three development scenarios that can be implemented strategically over time to enhance the Transit Center are described below.

## Scenario 1

Scenario 1 provides the basic park and ride services available today but in a manner that can accommodate anticipated future demand. The surface parking lot would accommodate 300 surface parking spaces and have potential for expanded or structured parking in the future. Basic bicycle parking with racks or bike lockers should be included. Layover parking for up to 10 buses would be added to reduce the deadhead time to the Missouri Flat Road Transit Center.

Bus bays with bus shelters for passengers would accommodate at least six buses and allow buses to get in/out of the site in an efficient manner. This would allow for staging of multiple express buses, connecting to local fixed routes and on-demand transit services. The additional bays would also accommodate an increase in services, if necessary, to accommodate regional growth.

The base scenario would also include electrical charging infrastructure. The project would need to connect to the local PG&E substation in Town Center West and install an on-site transformer and meter.

Charging systems would be installed to accommodate El Dorado Transit’s future electric buses. These systems could be in-ground or over-bay charging units and should be determined through a separate effort by the transit agency when procuring their updated electric fleet. Additionally, electrical vehicle charging stations should be installed to accommodate the transitioning personal vehicle fleet, as well as e-bike charging stations. Preliminary spaces have been designated and identified in the concepts, but conduit and pull boxes should be installed across the entire parking lot to accommodate a much larger personal electrical vehicle fleet in the future. Security features such as cameras and/or patrol would also be provided.



## Scenario 2

Scenario 2 builds from Scenario 1 by adding features to accommodate a wider range of first/last mile mobility options. Enhanced pick-up and drop-off areas would be added for TNC, taxi, or other rideshare services. The dedicated curb space could contain information boards or digital kiosks to inform users about the ride sharing options.

This scenario would also add amenities to increase both shared and personal bicycle use. Indoor bicycle parking would create a more secure location to store bicycles away from the elements increasing the number of months per year that people can choose to bike to the Transit Center.

This scenario would also provide opportunities to work with third party vendors to provide shared mobility services on the site. This could be in the form of an electric car share, or micro-mobility options such as electric-assist bicycles and scooters. These services could accommodate longer first/last mile connections.



### Scenario 3

Scenario 3 would include all of the services and amenities from the previous scenarios but allow for additional benefit by adding flexible building space that can accommodate a variety of services. The building could focus on the needs of El Dorado Transit by providing a western satellite office, driver restrooms and break areas, or maintenance facilities for their fleet.

The rider experience would also be enhanced by creating an indoor waiting area with additional route planning, way finding information and restrooms. These services could utilize technology for real time bus tracking, communication services, and additional security. The space could also attract third party retailers to provide coffee, meals, or convenience items.

It is anticipated that the Transit Center will evolve into a mobility hub over time. Increased capacity will help fulfill unmet demand, which in turn will increase revenues that can be used to further enhance the station. Additional enhancements will allow a wider variety of residents and employees to take advantage of the services, further activating the Transit Center. An efficient, vibrant Transit Center will attract new employers to the El Dorado Hills Town Center and Business Park; new employees associated with the new job opportunities may be more likely to utilize transit but live outside of El Dorado Hills.

There are additional potential economic benefits associated with the fact that persons with limited mobility, such as seniors, youth, people with disabilities, and others who cannot drive or who do not own cars, would be provided with a viable, affordable transportation option for shopping and other personal travel needs. With a number of senior communities located, or under development, in the area, as well as market rate developments where senior households comprise a large proportion of the

total residents, the transit center will likely represent an important amenity in the area as these older households attempt to age in place in an otherwise auto-oriented environment.

The layout of the transit center itself can be designed to optimize the potential benefits to surrounding businesses by orienting the parts of the transit center so riders who are either waiting for transfers or are transitioning from transit to other modes of travel can conveniently access nearby businesses. For example, placing passenger waiting areas at “the front” of the transit center, where a transit patron could easily walk across the street to a retail business, would encourage transit patrons to use the nearby businesses. Ensuring good visibility between the businesses and the transit center and providing convenient pedestrian and bicycle connections that minimize conflicts with vehicles would help to increase the potential patronage of businesses by transit riders.

Over the long-term, the buildout of property surrounding the transit center can also help to enhance the value and utility of the transit center. Retail and services establishments can serve as an amenity for transit users and can benefit from the vehicular and pedestrian traffic that a transit center will attract. Conversely, provision of amenities such as convenience retail and services can help to bolster transit ridership. Suitable businesses might include coffee shops, newsstands, quick serve restaurants, stores with food to take home, and other convenience-oriented businesses, such as drycleaners. The key to success for these types of businesses will be to position them so that they have good visibility and access to through traffic on adjacent streets as well as convenient access to other nearby businesses and housing, while also being conveniently accessible to transit patrons. This allows transit patrons to serve as an additional source of demand, rather than main source of market support.

Another potential opportunity to increase the value of the transit center is to position it as a staging site for people who are traveling to the El Dorado Hills area to access the Sacramento Placerville Transportation Corridor (SPTC) recreational trail. El Dorado Transit, and other future transit operators, could market service to the site as an efficient way to access the trail, and to allow patrons to travel with their bicycles. If a transit operator serves multiple stops along the SPTC corridor, such as in Placerville, El Dorado Hills, and/or Folsom, there would be potential for trail users to use the transit service as a shuttle from one location on the SPTC to another. For example, mountain bicyclists could start their day near a transit stop in Folsom, take their bikes on transit to the El Dorado Hills transit center, ride on surface streets to the SPTC, and then ride the SPTC trail downhill to Folsom.



*El Dorado Trail – Sacramento Placerville Transportation Corridor (J. Neau)*



CONCEPTUAL - NOT FOR CONSTRUCTION  
DETAILED ENGINEERING DESIGN REQUIRED

Multi Modal Transit Center  
Site 3 Conceptual Site Plan

Figure 10



CONCEPTUAL - NOT FOR CONSTRUCTION  
DETAILED ENGINEERING DESIGN REQUIRED

Multi Modal Transit Center  
Site 5 Conceptual Site Plan

# Planning for the Future

With the increasing concern for balancing the needs for **all roadway users**, and the growth of transportation network companies (TNCs) like Uber and Lyft, and micro-transit, demand for curbside pickups, drop-offs and dwell times is growing dramatically. Our transportation systems need to adapt to accommodate these changes. Automated vehicles have the potential to change our roadways even further. It is now more important than ever to have an eye towards future transportation technologies as we design and retrofit transportation systems, including a new Transit Center.

Part of the magic of transportation network companies - and in the future automated vehicles - is that they convert demand for parking into passenger-loading events. The freedom and time savings realized by their users are key factors to the TNC mobility success story. The need for single occupancy vehicle parking will continue to decline into the future.

Of course, a shift from parking to passenger loading creates ripple effects felt by nearly everyone that relies on the transportation system. It also raises the stakes for those who have made, or are trusted with making, decisions regarding current and long term land use and transportation system plans. Development of the Transit Center would provide the opportunity to plan for future changes in the transportation system. In doing so, there are three key issues that should be considered.

1. Curbside management and pick-up drop-off areas should take a more prominent role in the Transit Center planning and design. In the future a majority of the transit users may not be parking in the lot.
2. Autonomous electric vehicles will need locations to park during off peak times, such as overnight. The Transit Center could form a partnership with an autonomous car provider to store and charge the fleet in El Dorado Hills. This could be a revenue source and allow for more efficient access to autonomous vehicles for transit riders.

If parking demand is dramatically reduced in the future, allow the Transit Center to flex and transform existing parking into other types of spaces. Surface parking could be converted into new buildings or plaza space. If structure parking is built, plan for conversion into future uses such as residential or office space. Special attention will need to be paid to ramping and floor heights to accommodate conversion.

# Appendices

Appendix A – Public Outreach Summaries

Appendix B – El Dorado County Transit Authority Staff Report