



**STAFF REPORT  
TOWN COUNCIL MEETING OF MAY 8, 2012  
BUSINESS ITEM**

**TO:** Honorable Mayor and Members of the Town Council

**FROM:** Brian Fragio, Director of Public Works /Town Engineer

**DATE:** April 30, 2012

**SUBJECT:** NEIGHBORHOOD ELECTRIC VEHICLE (NEV) TRANSPORTATION

**RECOMMENDATION:**

Direct Staff to:

1. Begin the process and acquire a consultant to prepare the NEV Transportation Plan, not to exceed \$35,000 of the General Reserve Funds, or
2. Hold off until outside funding can be established to pay for the consultant services and future processes.

**ISSUE STATEMENT AND DISCUSSION:**

Mayor Calvert requested this item be brought forward for Council direction.

At the March 10, 2009 Town Council meeting, staff provided Council with information regarding the City of Lincoln & City of Rocklin Neighborhood Electric Vehicle (NEV) development and process. Staff spoke to several people involved in the Lincoln NEV development and the program was initiated by an electric vehicle group that spawned from the Del Webb Development. With Lincoln having the surrounding area adjacent to Del Webb undeveloped, it was very easy to make improvements to the streets to accommodate the NEVs. All commercial surrounding Del Webb can be accessed by NEV. Rocklin was not so lucky, since most of the street system was in place. Rocklin has done the minimal effort by installing NEV route signs, but has not invested into street improvement to accommodate NEV circulation. As for Loomis, most of the rural roads are substandard (< 24' wide) and would require 16 – 22 feet of widening to accommodate NEV travel. Attached is a figure showing the speed limits throughout Town. Green highlighted streets (<25mph) would allow NEV travel. Yellow Highlighted streets (<35mph) would allow NEV travel, but would need further investigation to make sure that it would be safe for combined vehicle/NEV interaction. The Red highlighted streets (>40mph) would not allow NEV travel on the existing roadways and would require a wider or separated asphalt shoulder to allow safe NEV movement. In staff's research on the item, all cities developed their NEV plan to accommodate the existing speed limits. As mentioned in the past, forcing speed limits down to accommodate the NEV would be a liability

to the Town and the Sheriff's Department would not be able to enforce the modified speed limit streets.

In order to implement an NEV Program, the following process would be followed:

1. Prepare an NEV Transportation Plan. This document provides information on the impacts and benefits of NEV in the community, the legal and safety requirements, route planning and design guidelines. Through this process there would be public workshops and surveys. The cost to prepare this document could range from \$25k - \$35k.
2. Prepare a Legislative Bill. This legislative action will allow the Town to establish an NEV program in the community and regulate NEV operation in the Town limits. The Town will need a sponsor to help present the Bill through the process.
3. CTCDC Interface. The California Traffic Control Devices Committee (CTCDC) approves all signage required to allow electric vehicles to interact with pedestrians, bicyclists, and motorists. Much of this work has been done by the City of Lincoln.
4. Public Involvement and Education. This activity will provide public awareness, outline a proposed plan & implementation schedule, education materials and policies.
5. Implementation. Once the NEV routing plan is established through the transportation plan, the proposed improvements shall be broken down into cost estimates and incorporated into the Capital Improvement Program. These improvements can be signage & striping, pavement improvements and/or roadway widening. The cost to prepare the NEV improvement cost estimate could range from \$10k - \$15k.
6. Review Plan. Once the plan is in effect, the Town would need to evaluate its effectiveness and review any safety issues. Normally the program is reviewed every 5 years.

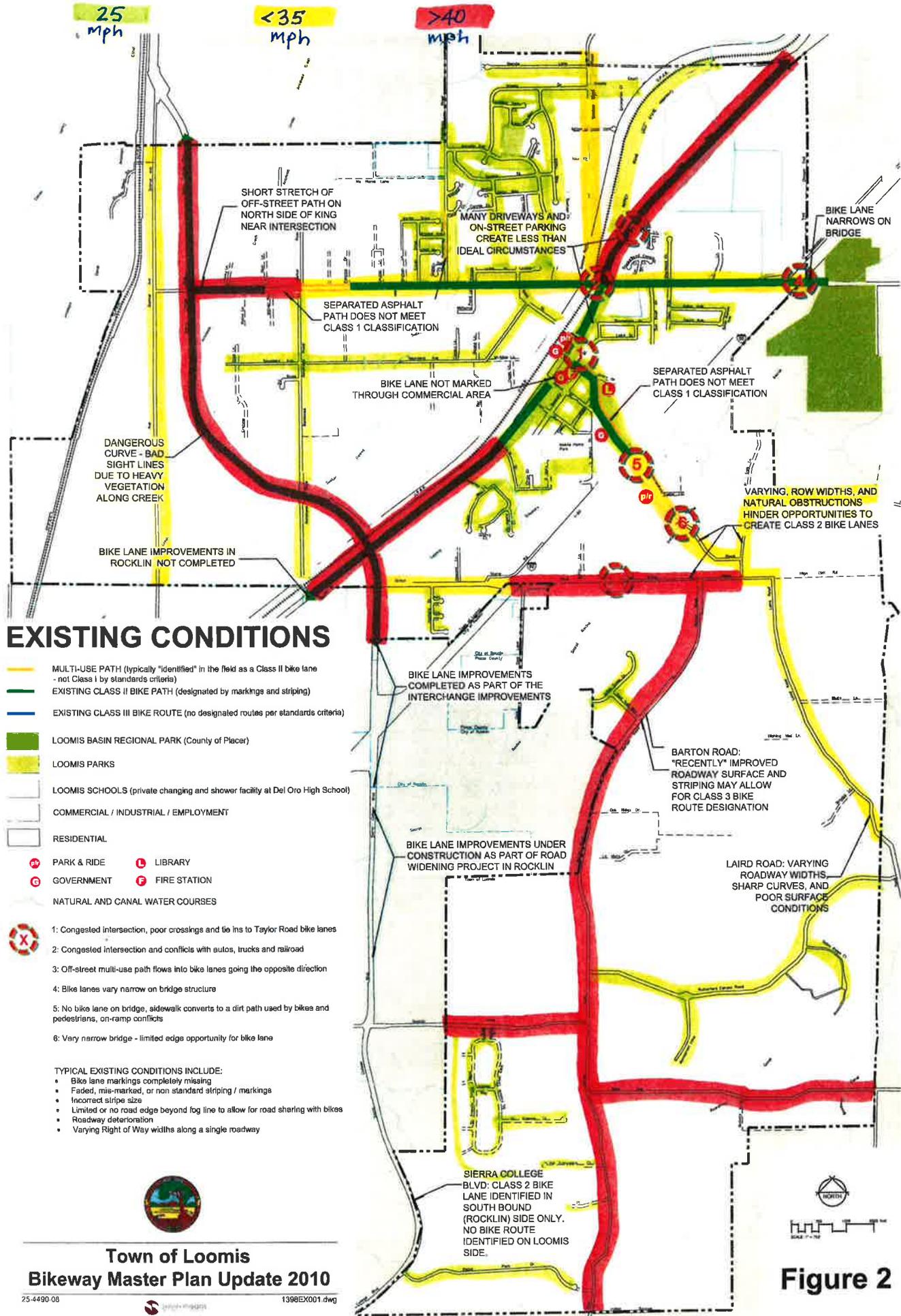
Attached is information regarding the NEV classifications for improvements. This is standard with all NEV operating cities. Also attached is Vehicle Code information provided by the Sheriff's Department.

#### **CEQA REQUIREMENTS:**

If the NEV improvements can be contained within Loomis right-of-way, the project would be exempt under California Environmental Quality Act (CEQA) Section 15301 c&d Class 1, "Existing Facilities" of the guidelines. Streets with speeds greater than 35 mph will need a separate lane from the existing vehicle lane which may require additional right-of-way and additional environmental process.

#### **FINANCIAL AND/OR POLICY IMPLICATIONS:**

Currently, there is no funding set aside for the NEV process or improvements. Funding would come from General Fund Reserves, State and/or Federal funding.



## EXISTING CONDITIONS

- MULTI-USE PATH (typically "identified" in the field as a Class II bike lane - not Class I by standards criteria)
- EXISTING CLASS II BIKE PATH (designated by markings and striping)
- EXISTING CLASS III BIKE ROUTE (no designated routes per standards criteria)
- LOOMIS BASIN REGIONAL PARK (County of Placer)
- LOOMIS PARKS
- LOOMIS SCHOOLS (private changing and shower facility at Del Oro High School)
- COMMERCIAL / INDUSTRIAL / EMPLOYMENT
- RESIDENTIAL

- P PARK & RIDE
- G GOVERNMENT
- L LIBRARY
- F FIRE STATION

NATURAL AND CANAL WATER COURSES



- 1: Congested intersection, poor crossings and tie ins to Taylor Road bike lanes
- 2: Congested intersection and conflicts with autos, trucks and railroad
- 3: Off-street multi-use path flows into bike lanes going the opposite direction
- 4: Bike lanes vary narrow on bridge structure
- 5: No bike lane on bridge, sidewalk converts to a dirt path used by bikes and pedestrians, on-ramp conflicts
- 6: Very narrow bridge - limited edge opportunity for bike lane

### TYPICAL EXISTING CONDITIONS INCLUDE:

- Bike lane markings completely missing
- Faded, mis-marked, or non standard striping / markings
- Incorrect stripe size
- Limited or no road edge beyond fog line to allow for road shoring with bikes
- Roadway deterioration
- Varying Right of Way widths along a single roadway



## Town of Loomis Bikeway Master Plan Update 2010

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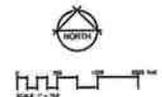


Figure 2

## Roadway Classifications

The following guidelines provide general design recommendations for NEV and multimodal facilities at various service levels. These guidelines are not intended to be a substitute for site-specific design and engineering that would consider, among other details, local conditions, development requirements, and safety considerations. These guidelines are to be used in conjunction with local improvement standards and procedures.

### *Class I, II, and III Facilities*

Multimodal facilities have various design specifications to consider. Classifications for NEV facilities were developed in a similar fashion to bicycle route facilities. Class I NEV routes provide a completely separate right-of-way for the exclusive use of NEVs, pedestrians and bicycles with cross-flow minimized. Class II NEV routes are designated as a separate striped lane adjacent to traffic. Class III NEV routes provide for shared use with automobile traffic on streets with a posted speed limit of 35 mph or less. Residential streets are generally Class III NEV routes. See **Exhibit 3-1** for cross section examples and summary of descriptions.

When choosing the facility classification, the design objectives should always be kept in mind to develop the best possible connections between residential neighborhoods, civic center destinations, parks, educational facilities, shopping and recreational facilities.

### **Class I Facilities**

Class I NEV routes provide a completely separate right-of-way for the exclusive use of NEVs. Shared use with pedestrians and bicycles is typical due to limited right of way availability. Off-street Class I NEV paths may consider such areas as open space corridors, utility easements including adjacent to railroads or other areas. This will minimize cross traffic conflicts with automobiles. Ideally, A Class I two-way path should consist of a 14-foot wide path, plus 2 foot shoulders, for an approximate 18 foot wide corridor. Several design options are presented in **Exhibit 3-2**.

Elements to consider when designing a Class I paved trail include, but are not limited to: safety, vegetation clearance, sign placement, trail shapes, sight distance, gradients, ramps, surfacing, grade crossings, and other geometric considerations.



**NEV on Class I separate pathway  
Lincoln, California**

### **Class II Facilities**

Class II NEV routes are designated as a separate, single-striped lane adjacent to traffic on streets with posted speed limits in excess of 35 mph. NEVs, bicycle, and pedestrian facilities will interface on local, residential and collector streets and therefore must be designated with appropriate signage alerting residents to the shared use function of the street and separated NEV/bike lanes.

Within the City of Lincoln, CA a width of 7-feet on Class II NEV facilities was appropriate on collector streets that meet the following design criteria:

- Collector streets should be capable of providing a high level of service to insure that adequate capacity exists for automobiles, bicyclists and NEVs. The City of Lincoln requires that two lane collector streets operate at level of service (LOS) C but this requirement is somewhat arbitrary and can vary depending on jurisdiction and location and type of facility. In the City of Lincoln, for two-lane collector streets, a target volume threshold of 24,000 vehicles per day was used.



**NEV on Class II facility  
Lincoln, California**

### **Class III Facilities**

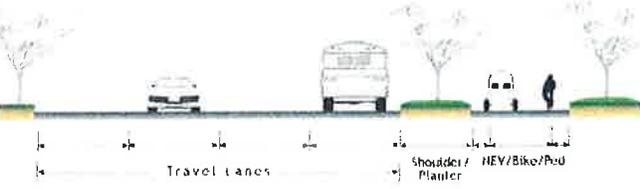
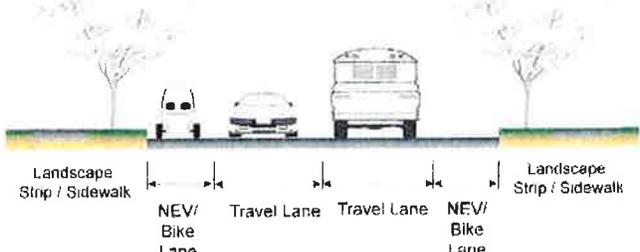
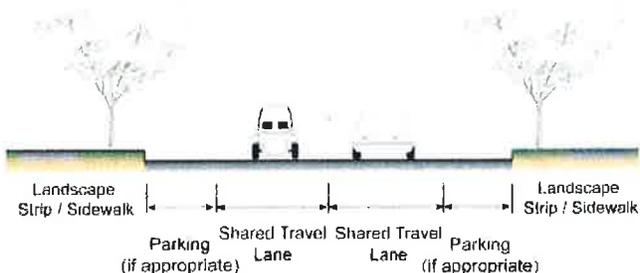
Class III NEV routes provide for shared use with automobile traffic on roads with a posted speed limit of up to 35 mph.

Shared NEV routes are normally designated on residential streets and low-volume neighborhood roads, resort communities, ferry terminals, airports, universities, and other low-speed areas. The maximum allowed speed limit is 35 mph. Although NEVs are legally permitted to operate on these streets, jurisdictions may elect to limit operations by statute where community or safety concerns dictate.

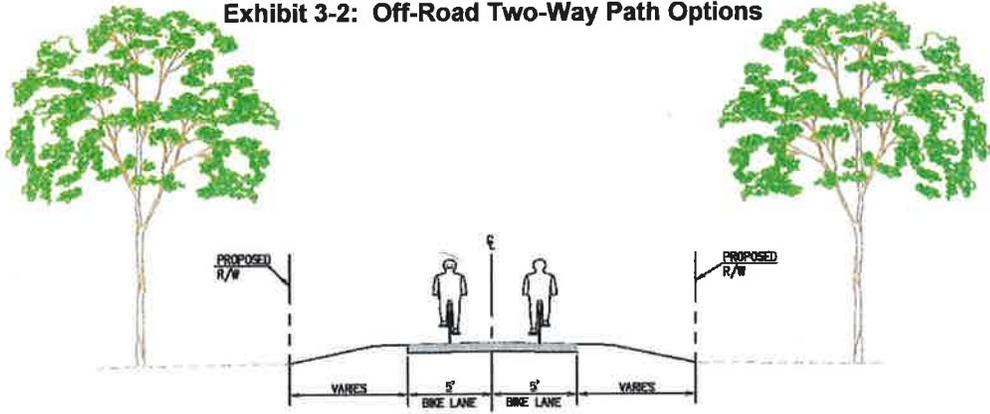


**NEV in Class III residential neighborhood.  
Lincoln, California**

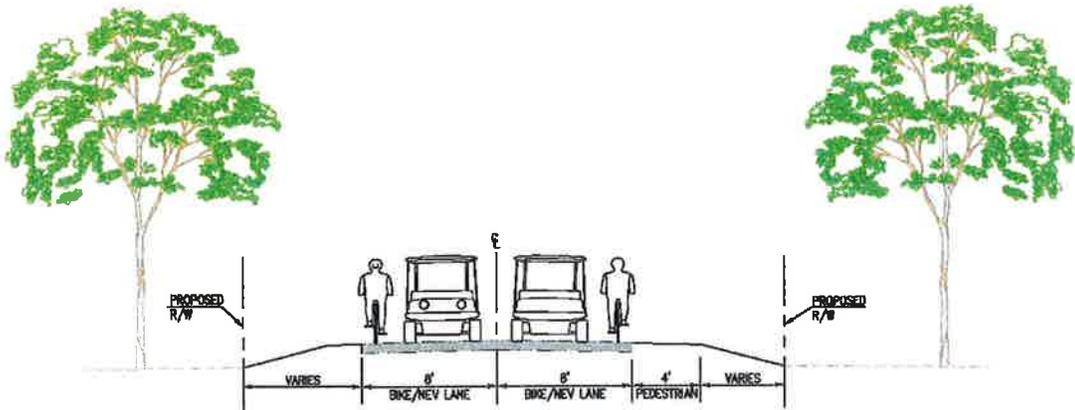
**Exhibit 3-1: NEV Cross-Sections**

Classification	Description	Example Cross-Section
<p>Class I</p>	<p>Completely separate pathway; adjacent to major roadways. NEVs can share a path with bicycles and pedestrians. See Exhibit 3-2 for path options.</p>	 <p>The diagram shows a roadway with two travel lanes. To the right of the travel lanes is a shoulder/planters area. Further to the right is a separate path for NEV/Bike/POD, which is completely separated from the roadway by a landscape strip/sidewalk.</p>
<p>Class II</p>	<p>Collector streets and minor arterials where speeds are typically greater than 35 mph. NEVs share lane with bicycles.</p>	 <p>The diagram shows a roadway with two travel lanes. On either side of the travel lanes are NEV/Bike lanes. The roadway is bordered by landscape strips/sidewalks.</p>
<p>Class III</p>	<p>Shared travel lane. Residential and low volume roads, low-speed commercial streets. Posted speed limits of up to 35 mph.</p>	 <p>The diagram shows a roadway with two shared travel lanes. On either side of the travel lanes are parking areas (if appropriate). The roadway is bordered by landscape strips/sidewalks.</p>

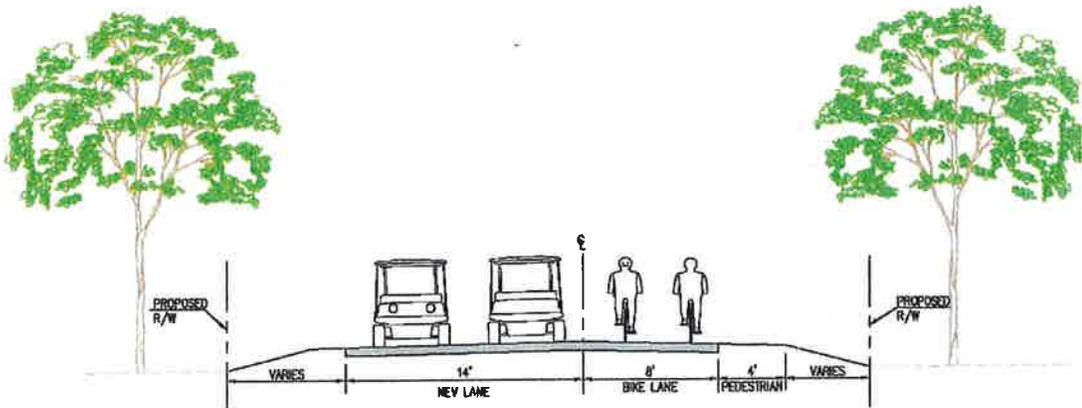
**Exhibit 3-2: Off-Road Two-Way Path Options**



**OPTION A: OFF ROAD BIKE PATH**



**OPTION B: OFF ROAD SHARED BIKE/NEV PATH (CONSTRAINED R/W)**



**OPTION C: OFF ROAD BIKE/NEV PATH (UNCONSTRAINED R/W)**

**VC§ 385.5. Low-speed Vehicle**

(a) A "low-speed vehicle" is a motor vehicle that meets all of the following requirements:

- (1) Has four wheels.
- (2) Can attain a speed, in one mile, of more than 20 miles per hour and not more than 25 miles per hour, on a paved level surface.
- (3) Has a gross vehicle weight rating of less than 3,000 pounds.

(b) (1) For the purposes of this section, a "low-speed vehicle" is not a golf cart, except when operated pursuant to Section 21115 or 21115.1.

(2) A "low-speed vehicle" is also known as a "neighborhood electric vehicle."

(Amended by Stats. 2006, SB 1559, Ch. 66, Sec. 1. Effective July 12, 2006.)

(Amended by Stats. 2004, Ch. 422, Sec. 2. Effective January 1, 2005.)

(Added by Stats. 1999, Ch. 140, Sec. 1. Effective January 1, 2000.)

**VC§ 21250. Definition of Low-speed Vehicle**

For the purposes of this article, a low-speed vehicle means a vehicle as defined in Section 385.5. A "low-speed vehicle" is also known as a "neighborhood electric vehicle."

(Amended by Stats. 2004, Ch. 422, Sec. 3. Effective January 1, 2005.)

(Added by Stats. 1999, Ch. 140, Sec. 6. Effective January 1, 2000.)

**VC§ 21251.      Application of Law**

Except as provided in Chapter 7 (commencing with Section 1963), Chapter 7.1 (commencing with Section 1964), Chapter 8 (commencing with Section 1965), and Chapter 8.1 (commencing with Section 1966) of Division 2.5 of the Streets and Highways Code, and Sections 4023, 21115, and 21115.1, a low-speed vehicle is subject to all the provisions applicable to a motor vehicle, and the driver of a low-speed vehicle is subject to all the provisions applicable to the driver of a motor vehicle or other vehicle, when applicable, by this code or another code, with the exception of those provisions that, by their very nature, can have no application.

(Amended by Stats. 2010 AB 1781, Ch. 452, Sec. 2.5. Effective January 1, 2011.)

(Amended by Stats. 2008 AB 1498, Ch. 179, Sec. 220. Effective January 1, 2009.)

(Amended by Stats. 2007, SB 956, Ch. 442, Sec. 2. Effective January 1, 2008.)

(Amended by Stats. 2004, Ch. 422, Sec. 4. Effective January 1, 2005.)

(Added by Stats. 1999, Ch. 140, Sec. 6. Effective January 1, 2000.)

**VC§ 21252. Disclosure Statement to Buyer of Low-speed Vehicle**

A vehicle dealer, selling a low-speed vehicle, shall provide to the buyer a disclosure statement regarding the operation of the vehicle that is in compliance with existing provisions of the California Code of Regulations.

(Added by Stats. 1999, Ch. 140, Sec. 6. Effective January 1, 2000.)

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**VC§ 21253.      Operation of Low-speed Vehicle on Roadway**

A low-speed vehicle operated or parked on the roadway shall at all times meet federal Motor Vehicle Safety Standards established for low-speed vehicles in Section 571.500 of Title 49 of the Code of Federal Regulations.

(Added by Stats. 1999, Ch. 140, Sec. 6. Effective January 1, 2000.)

**VC§ 21254.      Altered Low-speed Vehicle**

A motor vehicle that was originally designated as a low-speed vehicle and that has been modified or altered to exceed 25 miles per hour shall not qualify for the relaxed federal Motor Vehicle Safety Standards established for low-speed vehicles and instead shall meet all federal Motor Vehicle Safety Standards for a passenger vehicle.

(Added by Stats. 1999, Ch. 140, Sec. 6. Effective January 1, 2000.)

**VC§ 21260.      Illegal Operation of Low-speed Vehicle**

(a) Except as provided in paragraph (1) of subdivision (b), or in an area where a neighborhood electric vehicle transportation plan has been adopted pursuant to Chapter 7 (commencing with Section 1963), Chapter 7.1 (commencing with Section 1964), Chapter 8 (commencing with Section 1965), or Chapter 8.1 (commencing with Section 1966) of Division 2.5 of the Streets and Highways Code, the operator of a low-speed vehicle shall not operate the vehicle on any roadway with a speed limit in excess of 35 miles per hour.

(b) (1) The operator of a low-speed vehicle may cross a roadway with a speed limit in excess of 35 miles per hour if the crossing begins and ends on a roadway with a speed limit of 35 miles per hour or less and occurs at an intersection of approximately 90 degrees.

(2) Notwithstanding paragraph (1), the operator of a low-speed vehicle shall not traverse an uncontrolled intersection with any state highway unless that intersection has been approved and authorized by the agency having primary traffic enforcement responsibilities for that crossing by a low-speed vehicle.

(Amended by Stats. 2010 AB 1781, Ch. 452, Sec. 3.5. Effective January 1, 2011.)

(Amended by Stats. 2007, SB 956, Ch. 442, Sec. 3. Effective January 1, 2008.)

(Amended by Stats. 2004, Ch. 422, Sec. 5. Effective January 1, 2005.)

(Added by Stats. 1999, Ch. 140, Sec. 6. Effective January 1, 2000.)

**VC§ 21266. Local Regulation of Low-speed Vehicle**

(a) Notwithstanding Section 21260, local authorities, by ordinance or resolution, may restrict or prohibit the use of low-speed vehicles.

(b) Notwithstanding Section 21260, a local law enforcement agency with primary traffic enforcement responsibilities or the Department of the California Highway Patrol may prohibit the operation of a low-speed vehicle on any roadway under that agency's or department's jurisdiction when the agency or the department deems the prohibition to be in the best interest of public safety. Any such prohibition shall become effective when appropriate signs giving notice thereof are erected upon the roadway.

(Added by Stats. 1999, Ch. 140, Sec. 6. Effective January 1, 2000.)