

**Introduced by Senator McClintock**

February 22, 2001

---

---

An act to add Section 162.3 to the Streets and Highways Code, and to add Section 21655.10 to the Vehicle Code, relating to highways.

LEGISLATIVE COUNSEL'S DIGEST

SB 545, as introduced, McClintock. Highways: exclusive-use or preferential-use lanes.

(1) Existing law requires that, prior to establishing exclusive-use or preferential-use traffic lanes for high-occupancy vehicles (HOV lanes), the Department of Transportation and local authorities, with respect to highways under their respective jurisdictions, make competent engineering estimates of the effect of the lanes on safety, congestion, and highway capacity.

This bill would require the Department of Transportation and local authorities, on or before January 1, 2003, to establish standards for all existing HOV lanes, evaluate all existing HOV lanes, and, consistent with the evaluation, continue the HOV lanes as HOV lanes, convert the HOV lanes to high-occupancy toll lanes, or convert the HOV lanes to mixed-flow lanes.

The bill would require that the engineering estimates include a traffic model study comparing the alternatives of establishing an HOV lane, establishing a high-occupancy toll lane, as defined, establishing a mixed-flow lane, or not establishing additional lanes.

The bill would require that the analysis results of the study and a description of the methodology used for the study be completed and documented. Certification of competency of the analysis results and methodology for an HOV lane project would be required for inclusion of the project in the state transportation improvement plan.

The bill would require that a copy of the analysis results and methodology description be submitted to the Governor and the Legislature within 6 months of completion.

To the extent that the provisions of the bill would apply to local authorities, the bill would impose a state-mandated local program by establishing additional duties upon local governmental entities.

(2) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement, including the creation of a State Mandates Claims Fund to pay the costs of mandates that do not exceed \$1,000,000 statewide and other procedures for claims whose statewide costs exceed \$1,000,000.

This bill would provide that, if the Commission on State Mandates determines that the bill contains costs mandated by the state, reimbursement for those costs shall be made pursuant to these statutory provisions.

Vote: majority. Appropriation: no. Fiscal committee: yes. State-mandated local program: yes.

*The people of the State of California do enact as follows:*

- 1 SECTION 1. Section 162.3 is added to the Streets and
- 2 Highways Code, to read:
- 3 162.3. (a) On or before January 1, 2003, the department and
- 4 local authorities, with respect to highways under their respective
- 5 jurisdictions, shall do all of the following:
- 6 (1) Establish standards to evaluate the effectiveness of all
- 7 existing exclusive-use or preferential-use lanes for
- 8 high-occupancy vehicles (HOV lanes). The standards established
- 9 by the department shall include, but not be limited to, the criteria
- 10 set forth in Section 21655.10 of the Vehicle Code.
- 11 (2) Evaluate all HOV lanes in accordance with the criteria
- 12 established under paragraph (1), and, consistent with the results of
- 13 the evaluation, continue the HOV lanes as HOV lanes, convert the
- 14 HOV lanes to high-occupancy toll lanes, or convert the HOV lanes
- 15 to mixed-flow lanes.
- 16 (b) Local authorities may utilize the standards developed by the
- 17 department to evaluate the HOV lanes within their jurisdictions.



1 SEC. 2. Section 21655.10 is added to the Vehicle Code, to  
2 read:

3 21655.10. (a) The competent engineering estimates required  
4 under subdivision (a) of Section 21655.5 shall include a traffic  
5 model study of not less than six months' duration that compares  
6 the alternatives of establishing an exclusive-use or  
7 preferential-use lane for high-occupancy vehicles (HOV lane  
8 alternative), establishing a high-occupancy toll lane (HOT lane  
9 alternative), as defined in subdivision (h), establishing a  
10 mixed-flow lane (mixed-flow lane alternative), or not establishing  
11 additional lanes (no-build alternative).

12 (b) Except as authorized under paragraph (2) of subdivision (f),  
13 the traffic model study required under subdivision (a) shall cover  
14 an analysis segment consisting of at least the entire affected  
15 freeway section, or the corridor of which that freeway is a part, and  
16 shall include, but need not be limited to, all of the following:

17 (1) A modal choice submodel showing the fraction of travelers  
18 that will choose a high-occupancy vehicle mode, such as car pools,  
19 vans, or buses, instead of driving alone, dependent upon, but not  
20 limited to, the number of passengers required to qualify a vehicle  
21 as a high-occupancy vehicle and the HOV lane time savings.

22 (2) Distribution of the total freeway volume between the HOV  
23 lane and the mixed-flow lanes, dependent upon modal choice  
24 fraction.

25 (3) A congestion submodel showing travel speeds and time,  
26 dependent on the vehicular volume in the various lanes.

27 (4) Calibration to confirm that the model yields results are  
28 consistent with observed prebuild traffic volumes, speeds, and  
29 number of car pools. The observed total prebuild person trips (over  
30 all modes) within the analysis segment, which shall be referred to  
31 as the "person-trips base," shall be held constant and used as the  
32 basis for subsequent benefit calculations.

33 (5) Iterating the model as necessary to ensure that the travel  
34 times found in paragraph (3) are consistent with those used in  
35 estimating the fraction choosing high-occupancy vehicle modes  
36 under paragraph (1).

37 (6) Total travel time, emissions, and fuel consumption shall be  
38 computed by summing over the same "person-trips base" for each  
39 build alternative, and expressed as change relative to the no-build  
40 alternative.



- 1 (7) Emissions estimates shall include carbon monoxide, carbon  
2 dioxide, hydrocarbons, and nitrogen oxides. Emissions and fuel  
3 consumption shall be computed using methods of the State Air  
4 Resources Board and shall be dependent upon vehicle miles  
5 traveled, vehicle trips, and average speeds in the various lanes.
- 6 (8) Capital costs, annual operating costs, and annualized  
7 capital and operating cost, shall be estimated for each alternative,  
8 incremental to the no-build alternative. Costs unusual to each  
9 alternative, including any special lane width, buffer lanes,  
10 additional shoulders, enforcement zones, merging regions, and  
11 enforcement operation, shall be separately identified and  
12 estimated.
- 13 (9) Cost-benefit ratios shall be estimated for each alternative  
14 and may be expressed as dollars of total annualized cost per unit  
15 of benefit for each of the various benefit measures specified in  
16 paragraphs (6) and (7).
- 17 (10) The study shall provide data sufficient to determine  
18 whether the use of high-occupancy vehicle lanes improves air  
19 quality to the extent included in the state implementation plan filed  
20 under the federal Clean Air Act (42 U.S.C. Sec. 7401, et seq.).
- 21 (11) The study shall compare the number of traffic violations,  
22 accidents, injuries, and fatalities that occur on portions of  
23 highways that have high-occupancy vehicle lanes to portions of  
24 highways that do not have those lanes.
- 25 (12) The study shall compare the average number of  
26 passengers per vehicle before the portion of the highway had an  
27 HOV lane with the average number of passengers per vehicle after  
28 the portion of the highway had an HOV lane.
- 29 (c) The Department of Transportation or local authorities shall  
30 analyze the results of the traffic model study to determine the most  
31 efficient choice among the HOV lane alternative, the HOT lane  
32 alternative, the mixed-flow lane alternative, and the no-build  
33 alternative in terms of total person-delay, emissions, and cost.
- 34 (d) The Department of Transportation or the local authority  
35 shall require that the performance results and comparative analysis  
36 conducted under subdivision (c) for a high-occupancy vehicle lane  
37 project be distributed as follows:
  - 38 (1) As part of any oral presentations at hearings and part of any  
39 visual presentations in handouts and workshops for the project.



1 (2) In any literature or visual displays prepared for the public  
2 or for public officials in relation to the project.

3 (3) In any environmental impact report prepared for the  
4 project.

5 (e) The analysis results and a description of the methodology  
6 shall be documented in sufficient detail to support stand-alone,  
7 critical review, and duplication of the results.

8 (f) (1) It is the intent of the Legislature that the Department of  
9 Transportation contract with the University of California for  
10 archiving and certification of competency of the documentation  
11 required under subdivision (e). That certification shall be required  
12 for inclusion of the project in the state transportation improvement  
13 program.

14 (2) A study that does not use the methodology described in  
15 subdivision (b) may not be certified unless the proponent of the  
16 alternative methodology proves that the alternative methodology  
17 yields results that are as comprehensive and accurate as the results  
18 obtainable through the methodology described in subdivision (b).

19 (g) The Department of Transportation or the local authority  
20 shall submit a copy of the documentation required under  
21 subdivision (e) to the Governor and the Legislature for review  
22 within six months of completion.

23 (h) For purposes of this section, a “high-occupancy toll lane”  
24 or “HOT lane” is an HOV lane that, for a toll, may be used by  
25 vehicles with less than the number of passengers otherwise  
26 required to lawfully use the lane.

27 SEC. 3. Notwithstanding Section 17610 of the Government  
28 Code, if the Commission on State Mandates determines that this  
29 act contains costs mandated by the state, reimbursement to local  
30 agencies and school districts for those costs shall be made pursuant  
31 to Part 7 (commencing with Section 17500) of Division 4 of Title  
32 2 of the Government Code. If the statewide cost of the claim for  
33 reimbursement does not exceed one million dollars (\$1,000,000),  
34 reimbursement shall be made from the State Mandates Claims  
35 Fund.

36

O

