

Technical Report Documentation Page

1. REPORT No.

2. GOVERNMENT ACCESSION No.

3. RECIPIENT'S CATALOG No.

4. TITLE AND SUBTITLE

Report On Proposed Truck Restriction On Route 280
(Junipero Serra Freeway) Within The Town Of Los Altos Hills

5. REPORT DATE

December 1968

6. PERFORMING ORGANIZATION

7. AUTHOR(S)

Legarra, J.

8. PERFORMING ORGANIZATION REPORT No.

9. PERFORMING ORGANIZATION NAME AND ADDRESS

State of California
Transportation Agency
Department of Public Works
Division of Highways

10. WORK UNIT No.

11. CONTRACT OR GRANT No.

12. SPONSORING AGENCY NAME AND ADDRESS

13. TYPE OF REPORT & PERIOD COVERED

14. SPONSORING AGENCY CODE

15. SUPPLEMENTARY NOTES

16. ABSTRACT

Interstate Route 280 is a new freeway which when completed will extend from San Jose to San Francisco. the section of Route 280 between Route 85 and Page Mill Road was opened to traffic on July 18, 1967. This freeway section passes through a sector of Los Altos Hills which is almost 100% residential. Presently the freeway is continuous from San Jose to Page Mill Road in Los Altos Hills. Completion of the entire freeway from San Jose to San Francisco will probably not occur before 1974 (see Figure 1).

Even before the opening of the section of freeway through Los Altos Hills, the idea of a truck restriction arose. Since the opening there have been many complaints about noise from residents of both Los Altos Hills and Los Altos.

On July 11, 1967, one week before this segment of freeway was opened, the Los Altos Hills City Council adopted Resolution No. 401 urging the California State Highway Engineer to prohibit heavy truck traffic on Route 280 through their city (see Appendix).

On February 5, 1968, the City Council adopted Ordinance No. 131 prohibiting truck traffic on Route 280 in their city (see Appendix).

On June 17, 1968, the City council adopted Resolution No. 466 urging the Division of Highways to recognize Ordinance No. 131 on a temporary basis (see appendix).

17. KEYWORDS

18. No. OF PAGES:

24

19. DRI WEBSITE LINK

<http://www.dot.ca.gov/hq/research/researchreports/1968/68-62.pdf>

20. FILE NAME

68-62.pdf

3950

C.2

LIBRARY COPY

Materials & Research Dept.

*File: Sound,
Vehicle
Noise*

**STATE OF CALIFORNIA
TRANSPORTATION AGENCY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS**

**Report on Proposed Truck Restriction on Route 280
(Junipero Serra Freeway)
Within The Town of Los Altos Hills**

Road 04-SCL-280

68-62

DECEMBER, 1968

*FJW
2/18/69*

Memorandum

Mr. James A. Moe
Director of Public Works

Date December 27, 1968

File :

From : Department of Public Works—Division of Highways

Subject: Report on Proposed Truck Restriction on Interstate Route 280
in the Town of Los Altos Hills, Santa Clara County

I. Background

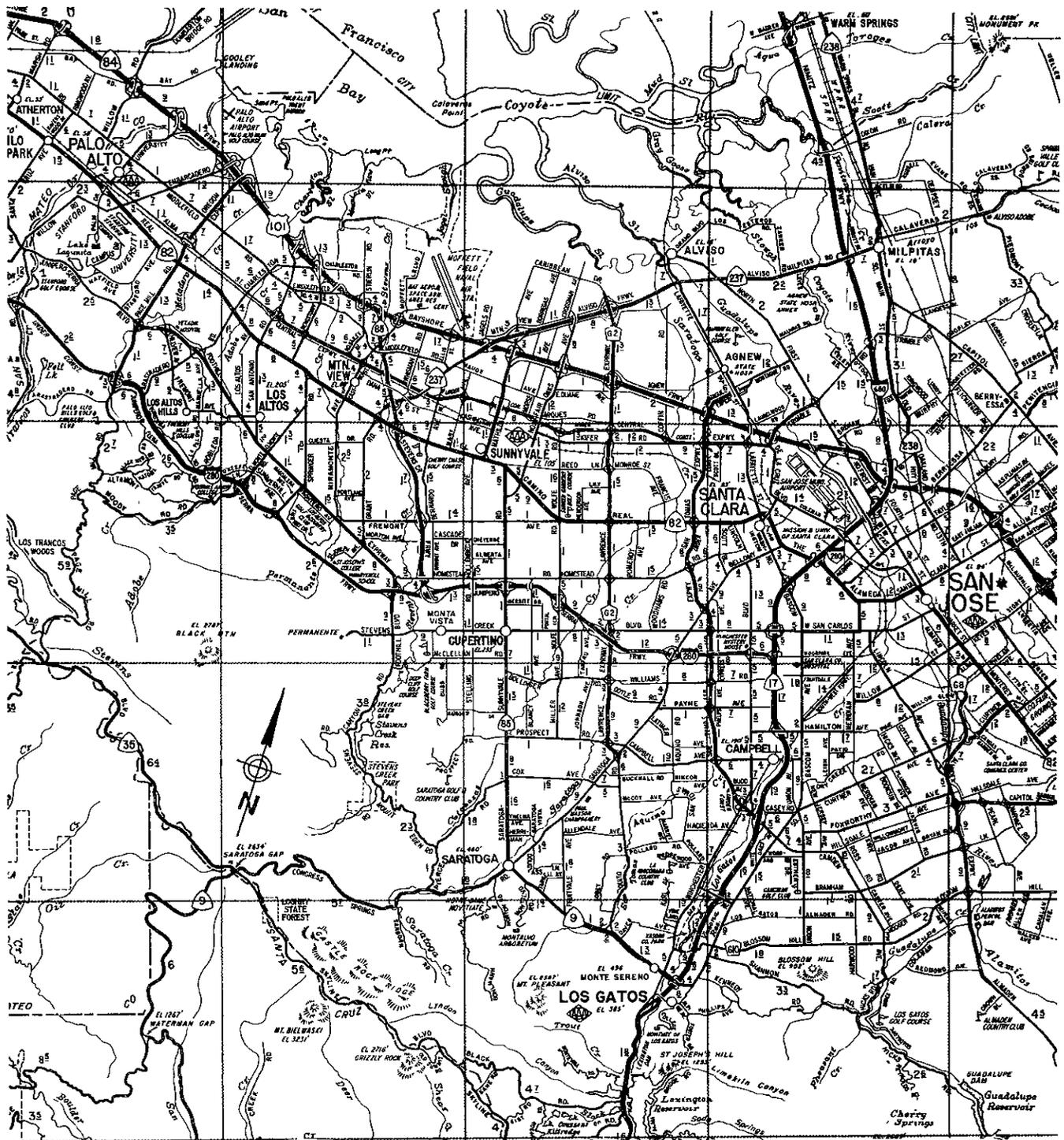
Interstate Route 280 is a new freeway which when completed will extend from San Jose to San Francisco. The section of Route 280 between Route 85 and Page Mill Road was opened to traffic on July 18, 1967. This freeway section passes through a sector of Los Altos Hills which is almost 100% residential. Presently the freeway is continuous from San Jose to Page Mill Road in Los Altos Hills. Completion of the entire freeway from San Jose to San Francisco will probably not occur before 1974 (see Figure 1).

Even before the opening of the section of freeway through Los Altos Hills, the idea of a truck restriction arose. Since the opening there have been many complaints about noise from residents of both Los Altos Hills and Los Altos.

On July 11, 1967, one week before this segment of freeway was opened, the Los Altos Hills City Council adopted Resolution No. 401 urging the California State Highway Engineer to prohibit heavy truck traffic on Route 280 through their city (see Appendix).

On February 5, 1968, the City Council adopted Ordinance No. 131 prohibiting truck traffic on Route 280 in their city (see Appendix).

On June 17, 1968, the City Council adopted Resolution No. 466 urging the Division of Highways to recognize Ordinance No. 131 on a temporary basis (see Appendix).



Scale:
 0 1 2 3
 Miles

Legend:

City limits of Los Altos Hills

— Limits of proposed truck ban on route 280 in Los Altos Hills.

Figure 1

This report has been prepared in response to Resolution 466. The Town of Los Altos Hills was notified on July 29, 1968, that the proposal would be carefully considered and that they would be advised of our findings.

II. Ordinance No. 131

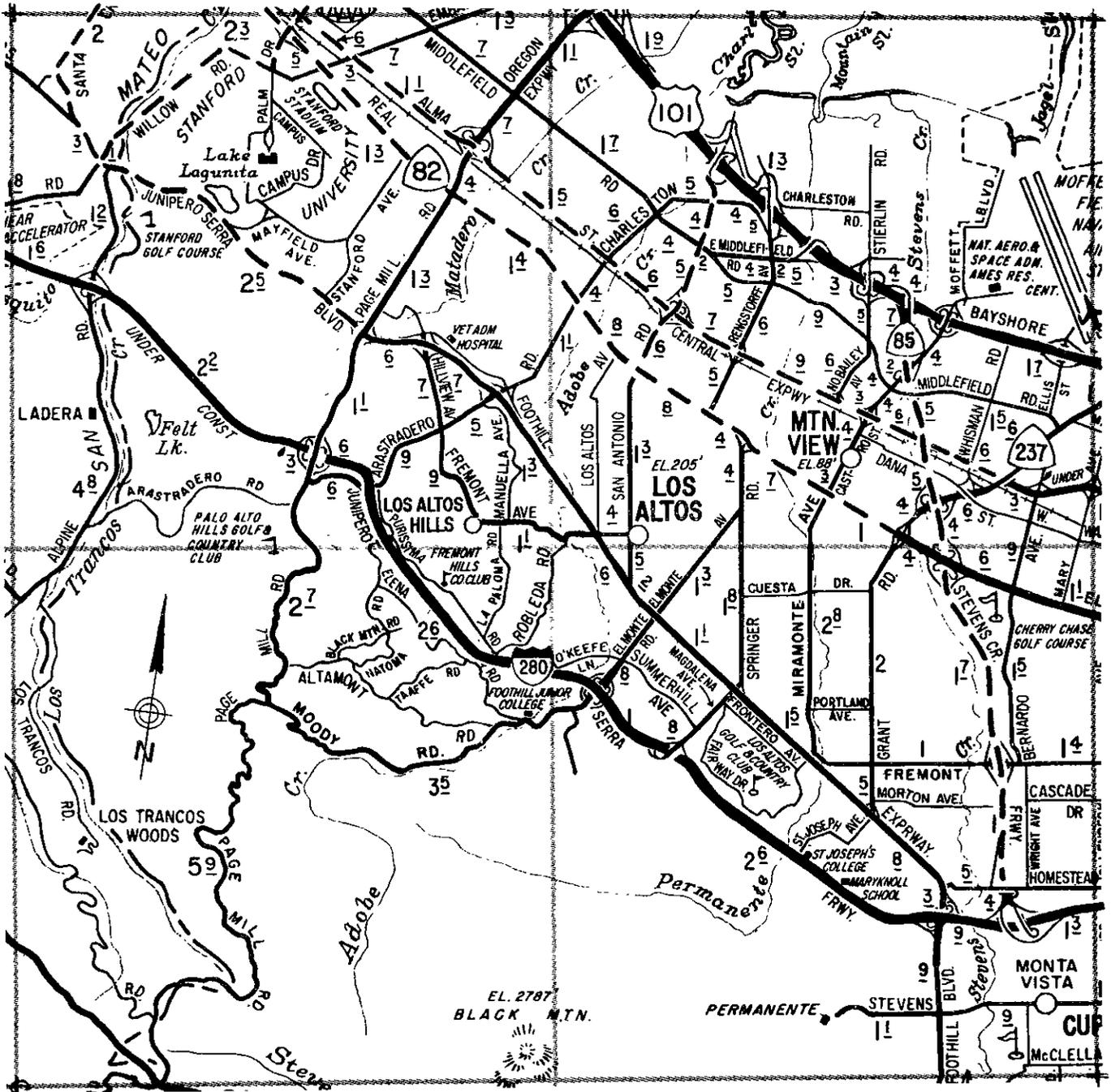
In brief, Ordinance No. 131 prohibits vehicles weighing more than three tons from using Route 280 in Los Altos Hills and establishes certain streets as alternate routes for truck traffic. These alternate routes lie primarily outside of the Town of Los Altos Hills and are under the control of other jurisdictions.

It should be noted that the 3-ton limit is very low. Oakland allows trucks up to 4.5 tons on Route 580 and the City of Palo Alto allows trucks up to 7 tons on all of its streets. A 3-ton limit will prohibit most two-axle trucks with dual wheels, unless they are of a very light type and empty. Oakland's 4.5-ton limit prohibits all but the lightest empty 3-axle trucks but allows many 2-axle delivery and service trucks to use the freeway. The 7-ton Palo Alto limit would seem to be primarily aimed at 5-axle rigs and loaded dump trucks.

Figure 2 is a map showing Route 280 through Los Altos Hills, the truck traffic routes designated in Ordinance 131 and sufficient other truck routes to give a general picture of the situation. Figure 3 consists of two photographs of Route 280 and photographs of two truck traffic routes designated in Ordinance 131, El Monte Road and Foothill Expressway. These photographs indicate the character of the routes and their surroundings. As will be explained in Section VI, most trucks now using Route 280 would be diverted to Foothill Expressway if Ordinance 131 were approved.

The alternate routes designated are reasonably good roads with the exception of the one route southwest of Route 280 which traverses Moody and Page Mill Roads. None of the alternate routes are equivalent to the Route 280 Freeway and the trucks now using Route 280 will suffer delays if forced to use these alternate routes.

TRUCK ROUTES IN VICINITY OF LOS ALTOS HILLS



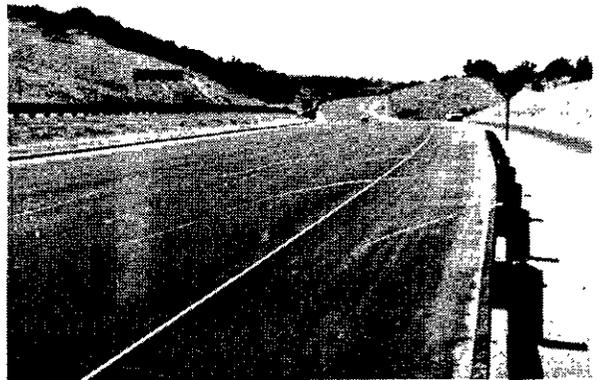
Legend :

- City limits of Los Altos Hills
- Truck routes designated in Los Altos Hills ordinance 131
- - - Other truck routes
- Route 280 Freeway

Figure 2



Looking south east out of Los Altos Hills



Looking northwest into Los Altos Hills

INTERSTATE ROUTE 280
NEAR EASTERLY CITY LIMITS OF
LOS ALTOS HILLS



Looking northwest on Foothill Expressway at El Monte Road



Looking northeast on El Monte Road between Route 280 and Foothill Expressway

TWO DESIGNATED TRUCK TRAFFIC ROUTES

Figure 3

III. Legal Considerations

Senate Resolution No. 201 adopted June 23, 1966, resolved "that the Department of Public Works shall exert every effort to maintain the National State of Interstate and Defense Highways free from restrictions on commercial vehicles which pay ... approximately one-third of the cost of building these highways."

Section 35701 of the Vehicle Code authorizes any city to prohibit the use of a street by any commercial vehicle or by any vehicle exceeding a specified weight limit.

Under the provisions of Vehicle Code 35702, no ordinance is effective which proposes to restrict the use (by trucks) of streets or highways not under the exclusive jurisdiction of the local authority enacting the ordinance, or, in the case of any State highway, until the ordinance has been submitted by the governing body of the local authority to and approved in writing by the Director of Public Works. In submitting a proposed ordinance to the Department for approval, the local authority shall designate therein, an alternate route for the use of vehicles, which route shall remain unrestricted by any local jurisdiction as to weight limits or types of vehicles so long as the ordinance proposed shall remain in effect.

While the Vehicle Code does not spell out the jurisdictional requirements of the alternate routes, it would seem difficult for a local governing body to designate alternate routes not under its jurisdiction, as does the Los Altos Hills ordinance.

IV. Other Considerations

The real problem is not trucks, nor is it freeway location. The real problem is noise. Noise is also at the root of many of the freeway route location controversies that have taken place during the last fifteen years.

Generally speaking, freeways benefit a community in three ways, which partly overlap.

1. They provide for growth in traffic which would otherwise stifle development by overloading the previously existing street and road system. A

special case of this benefit is that they provide safe, quick and more adequate routes for trucks than other roads, and if a community is dependent on trucks for existence, as every community in California is, the citizens of the community as well as the truck operators are far better off to have the trucks on freeways than elsewhere.

2. They open up new areas to provide for increased population as opposed to crowding the increased population into congested urban areas (tenements).
3. They reduce the cost of transportation and thus make available a substantial portion of the total community resources for amenities which would otherwise not be attained.

Notwithstanding the preceding generalizations, it is realized that highways constructed where none existed before can cause shifts in traffic patterns that are unwanted, especially in localized areas.

It is possible that the Bayshore Freeway and El Camino Real have taken care of all the truck travel that has heretofore been needed in the Los Altos Hills area, and no disservice to merchants or truckers would be done by continuing the historic pattern. However, a disservice might be done to residents of Los Altos and Palo Alto because trucks destined for the Stanford Industrial Park from San Jose and Los Angeles would have to use streets in those cities instead of Route 280.

V. Traffic Volumes

A September 1968 count on Route 280 between Magdalena Avenue and El Monte Road is shown on Figure 4. Earlier counts indicate that this is the point of greatest traffic flow on Route 280 in Los Altos Hills.

There is a very strong peaking pattern, northbound in the morning and southbound in the evening. Midday and nighttime traffic seldom exceeds 1,000 vehicles per hour for both directions combined. Two-way traffic averages less than 250 cars per hour over the 9-hour period from 9:00 p.m. to 6:00 a.m. the following day with a maximum of 544 vehicles between 9:00 p.m. and 10:00 p.m.

Table 1 shows the two-way total traffic count by time of day and type of vehicle.

VI. Truck Traffic

Figure 5 shows the total truck traffic in each direction by time of day. It can be seen that most of the 431 trucks passed between 6:00 a.m. and 6:00 p.m. and that no more than 33 trucks passed in one direction during any single hour. The total two-directional truck volume in the 9-hour period from 9:00 p.m. on Wednesday, September 4, 1968, to 6:00 a.m. the following morning was eight trucks. One of these eight had three axles; the other seven were two-axle trucks with dual wheels.

In order to gain some idea of the origin-destination pattern of trucks on Route 280, a random sample of trucks entering Los Altos Hills on the freeway from the south were followed to see where they went. The sample was very small, but the destinations fit into a distinct pattern. The destinations of these trucks are indicated on Figure 6 by an arrow showing the point at which each of the trucks left the local truck route network.

Based on this sample and the shortage of truck routes between Route 101 and Alma Street (along the Southern Pacific Railroad) the following conclusions are drawn for the present situation:

1. Most truck traffic on Route 280 in Los Altos Hills has its origin or destination close to Route 280 or in commercial and industrial centers near Page Mill Road or El Camino Real.
2. At the present stage of completion, Route 280 is not a practical through route between San Jose and points north of Palo Alto because trucks weighing more than 7 tons do not have a good route between the end of Route 280 at Page Mill Road and Route 101. Therefore, virtually no through truck traffic uses Route 280 north of Route 85 (Route 85 is a north-south route approximately 3 miles east of Los Altos Hills).

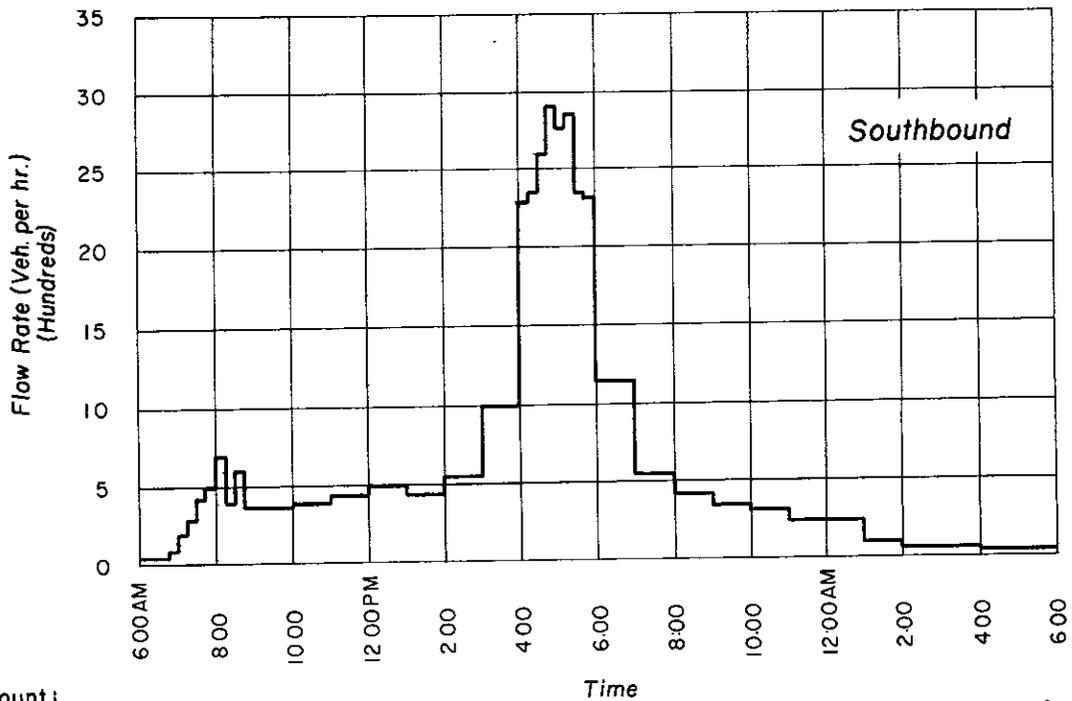
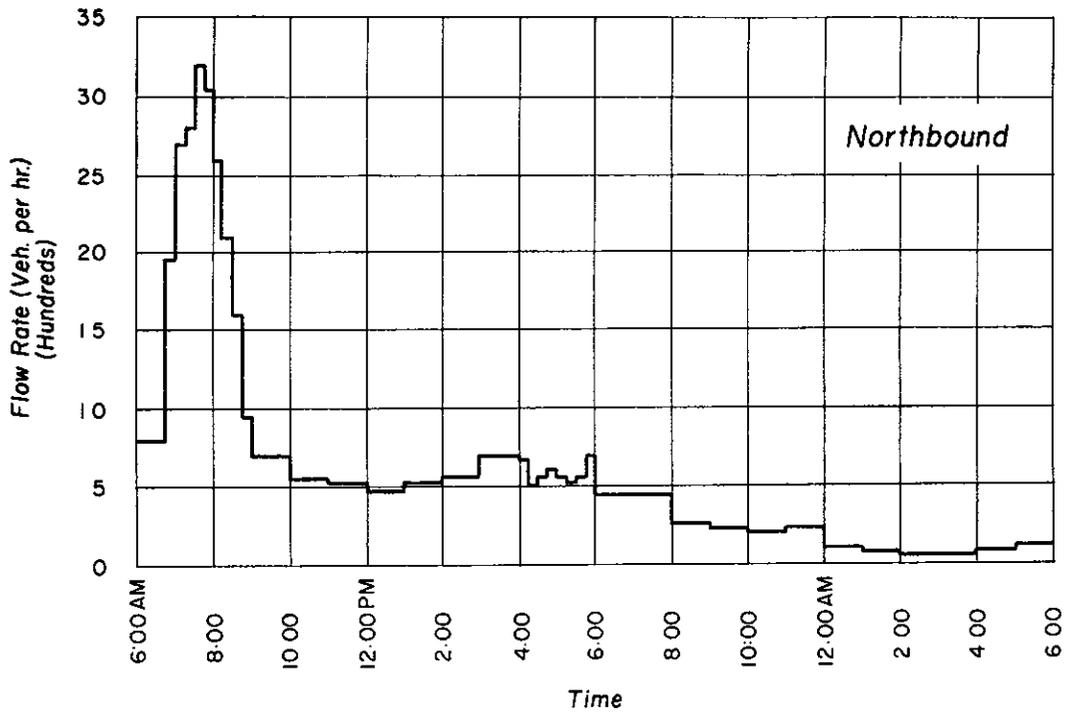
**TRAFFIC COUNT
BETWEEN
EL MONTE RD. & MAGDALENA AVE.**

Type of Vehicle	Time Period					
	0600 0800	0800 1200	1200 1700	1700 2100	2100 0600	24 Hr. Total
Automobile	3768	3601	6736	5925	2015	22045
Pickup	629	442	806	480	99	2456
Auto or Pickup with Trailer	4	8	10	6	0	28
Total (light vehicles)	4401	4051	7552	6411	2114	24529
Bus	0	1	6	0	0	7
Two axle truck with dual wheels	22	50	89	20	7	188
Three axle truck						
Dump	4	33	33	1	0	71
Transit mix	0	5	5	0	0	10
Other	1	9	17	3	1	31
Four axle truck	2	8	6	0	0	16
Five axle truck						
Dump	16	21	41	2	0	80
Bulk cement	1	2	3	0	0	6
Other	5	11	6	0	0	22
Total (busses and truck)	51	140	206	26	8	431
TOTAL (All vehicles)	4452	4191	7758	6437	2122	24960
Truck Percentage	1.14	3.34	2.66	.40	.38	1.78

Date of Count:
Sept. 4 & 5, 1968

TABLE 1

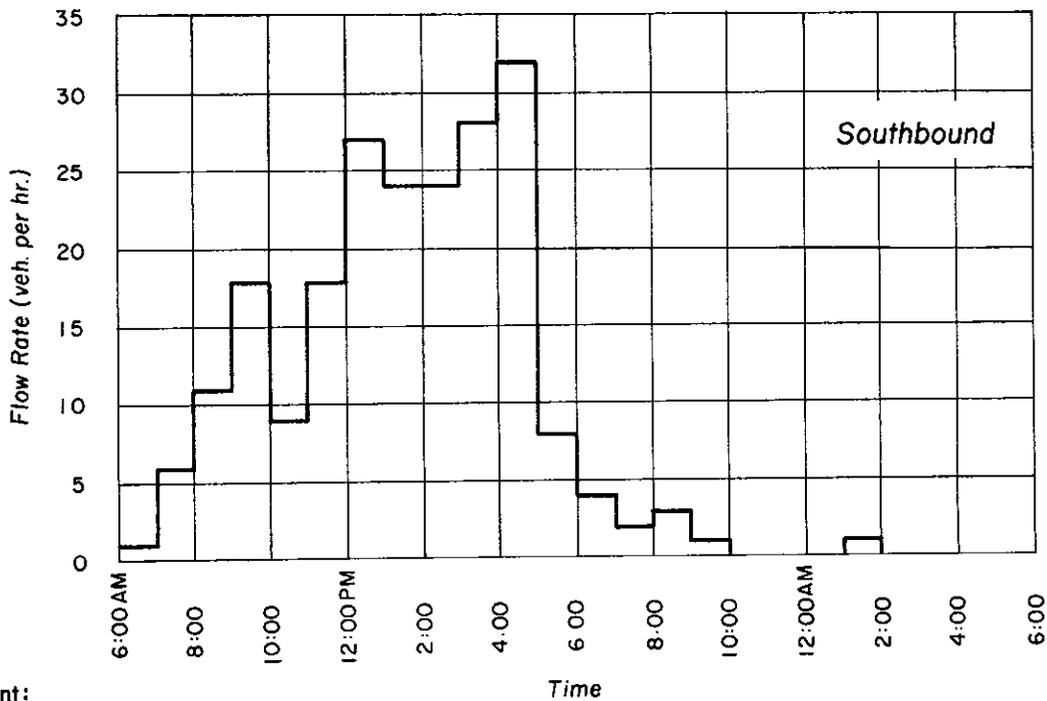
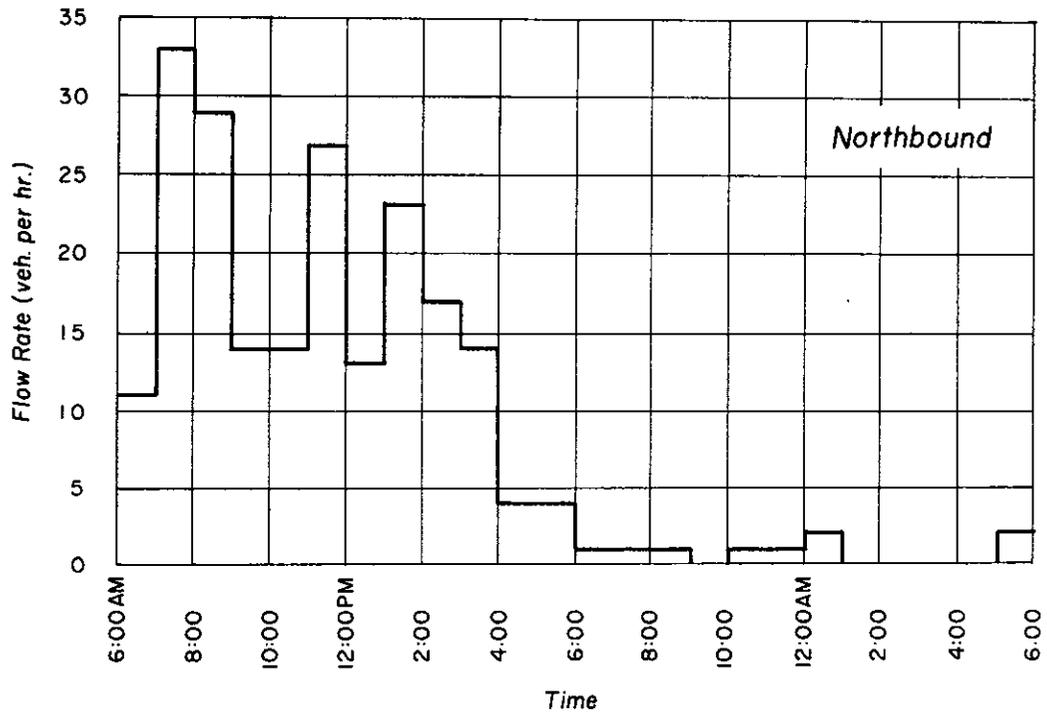
TRAFFIC COUNT BETWEEN EL MONTE RD. & MAGDALENA AVE. (ALL VEHICLES)



Date of Count:
Sept. 4 & 5, 1968

Figure 4

TRUCK COUNT BETWEEN EL MONTE RD. & MAGDALENA AVE. (TRUCKS WITH MORE THAN 4 WHEELS)

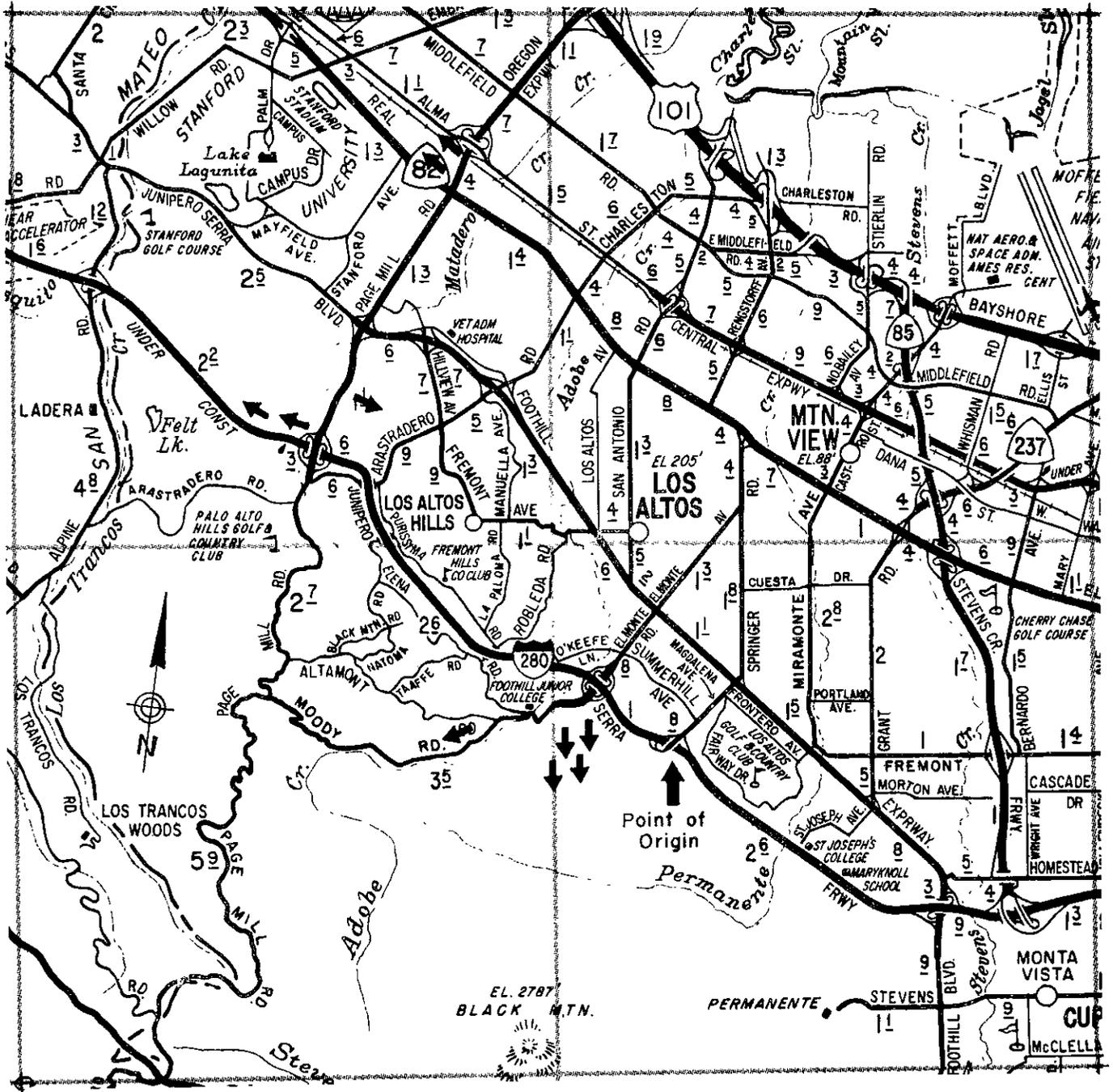


Date of Count:
Sept. 4 & 5, 1968

Figure 5

TRUCK DESTINATIONS

A survey of the destinations of trucks entering Los Altos Hills northbound on route 280.



Legend :

- City limits of Los Altos Hills
- ← Point at which truck left truck route network.

Figure 6

3. If Route 280 in Los Altos Hills were closed to truck traffic, most of the truck traffic now using Route 280 would be diverted to Foothill Expressway.

VII. Truck Noise

A traffic noise study was conducted to obtain factual data about the noise situation in the Los Altos Hills area. This study shows that the most acute noise problems are not in Los Altos Hills but in Los Altos at the Foothill Boulevard-Route 280 Interchange. This is caused by trucks entering and leaving the freeway. This location has background noise of only 45-50 dBA but truck noise peaks up to 82 dBA. Noise levels this high were recorded near homes very close to the interchange ramps and were caused by trucks accelerating and shifting gears.

The most acute noise problem studied within the Town of Los Altos Hills was on Vista Del Valle Court. At this location the background noise averages 58-62 dBA with several peaks caused by sports cars and motorcycles reaching 68 dBA. At another location, Viscaino Court, the background noise was 45-55 dBA with peaks owing to diesel trucks of 58-63 dBA.

A truck ban on the Los Altos Hills portion of Route 280 would reduce noise levels there by only a small amount, but would aggravate the noise problem at the Route 280-Foothill Boulevard Interchange in Los Altos where trucks register up to 82 dBA. The Foothill Expressway runs through flat terrain in a residential area of Los Altos. The houses are set well back from the expressway, but are in general closer to the road than the houses along the freeway. In addition, the signals on the expressway will cause trucks to stop and accelerate through the gears. Not only does acceleration produce maximum noise, but the interrupted bursts produced by gear shifting have a particularly annoying quality.

VIII. Summary and Conclusions

1. Virtually no trucks use Route 280 in its present state of completion as a through route between San Jose and points north of Palo Alto. Truck restrictions in Palo Alto make it impractical

for trucks weighing more than seven tons to reach Route 101 from the present end of Route 280 at Page Mill Road.

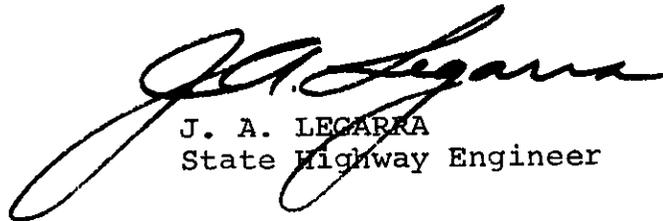
2. If trucks were banned from Route 280, the principal bypass route would be Foothill Expressway, not Route 101, since most of the trucks have destinations near Route 280.
3. The diversion of trucks from Route 280 to the Foothill Expressway will increase rather than decrease residential noise problems since houses are generally closer to the expressway and because of the stopping and starting at the traffic signals.
4. Trucks now using Route 280 would experience varying amounts of delay if forced to use alternate routes.
5. Automobile traffic is not being delayed by trucks at present traffic level.
6. Safety is not a problem at the present traffic level (peak hour 3200 vph). Truck traffic is only 1.7% of the total traffic.

There is very little similarity between the present situation in Los Altos Hills and the situation in Oakland, where trucks are not allowed on Route 580. In Oakland the use of Route 580 by trucks would cause considerable delay to peak hour automobile traffic while saving through trucks virtually no time. The accident rate on Route 580 is presently higher than the Statewide average for a similar facility and would become even higher if slow moving trucks were allowed on Route 580 between Grand Avenue and Route 238 which has substantial grades and very high peak hour volumes.

A much more extensive system of truck routes connects the area around Route 580 to Route 17 than is available from Route 101 for trucks wishing to make deliveries near Route 280. In addition, local trucks which are delayed by the Route 580 truck ban are primarily those making deliveries to Oakland destinations. It appears that this would not be the case in Los Altos Hills. The effect would be to shift trucks from one

highway (Route 280) which has a wide buffer zone to another highway outside the Town of Los Altos Hills which does not have a wide buffer zone.

Having reached these conclusions, we can find no valid engineering argument for banning trucks from Route 280 in Los Altos Hills; therefore, approval of the ordinance is not recommended.



J. A. LEGARRA
State Highway Engineer

Attachments

A P P E N D I X

RESOLUTION NO. 401

A RESOLUTION OF THE CITY COUNCIL OF THE TOWN OF LOS ALTOS HILLS RELATING TO TRUCK TRAFFIC ON INTERSTATE ROUTE 280.

WHEREAS, a portion of Interstate Route 280, commonly known as Junipero Serra Freeway, passing through the corporate limits of the Town of Los Altos Hills is about to be opened to traffic, and

WHEREAS, the area traversed by said Freeway is exclusively a residential area, and

WHEREAS, the Bayshore Freeway is the most logical route for truck traffic because of its location, and

WHEREAS, Junipero Serra Freeway will not be appropriate for heavy truck traffic due to the grades thereon, While Bayshore Freeway is appropriate for such traffic, and

WHEREAS, although Junipero Serra Freeway is not designated as a Scenic Highway, it is in fact a scenic highway as indicated by the considerable sums of money which have been budgeted for landscaping thereof, and

WHEREAS, the MacArthur Freeway through the City of Oakland does not presently carry truck traffic inasmuch as a temporary prohibition thereon was established several years ago, and

WHEREAS, it is deemed that heavy truck traffic on Junipero Serra Freeway through the Town of Los Altos Hills will be impractical and detrimental to the best interest of the citizens of the Town of Los Altos Hills,

NOW, THEREFORE, BE IT RESOLVED by the City Council of the Town of Los Altos Hills that said Council does hereby urge that the California State Highway Engineer immediately adopt and

ORDINANCE NO. 131

AN ORDINANCE OF THE CITY COUNCIL OF THE TOWN OF LOS ALTOS HILLS PROHIBITING TRUCK TRAFFIC ON JUNIPERO SERRA FREEWAY (INTERSTATE ROUTE 280) WITHIN THE TOWN OF LOS ALTOS HILLS, PROVIDING ALTERNATE ROUTES, AND PROVIDING PENALTIES FOR VIOLATIONS.

THE CITY COUNCIL OF THE TOWN OF LOS ALTOS HILLS DOES HEREBY ORDAIN AS FOLLOWS:

SECTION 1. The operation of any vehicle with a maximum gross weight in excess of three (3) tons upon the Junipero Serra Freeway (Interstate Route 280) within the Town of Los Altos Hills is hereby prohibited.

SECTION 2. This ordinance shall not be deemed to prohibit the operation of a vehicle with a maximum gross weight in excess of three (3) tons upon a portion or portions of said freeway, when such vehicle is coming from or going to a Truck Traffic Route and its operation on said Freeway is necessary for the purpose of making pickup or deliveries of goods, wares and merchandise from or to any building or structure located on such Freeway or on a restricted street or for the purpose of delivering materials to be used in the actual and bona fide repair, alteration, remodeling or construction of any building or structure upon such freeway or restricted streets, for which a building permit has previously been obtained.

SECTION 3. This ordinance shall not apply to:

- (1) Passenger busses under the jurisdiction of the Public Utilities Commission, and
- (2) Any vehicle owned by a Public Utility while necessarily in use in the construction, installation or repair of any public utility.

SECTION 4. The following streets and parts of streets are hereby declared to be Truck Traffic Routes for the movement of vehicles exceeding a maximum gross weight of three (3) tons:

- (a) Bayshore Freeway (U. S. 101 alternate).
- (b) Foothill Expressway.
- (c) El Monte Road from Summerhill Road to Moody Road.
- (d) Stonebrook Road from El Monte Road to Prospect Road.
- (e) Moody Road from El Monte Road to Westerly limits of Town of Los Altos Hills.
- (f) Page Mill Road.
- (g) Arastradero Road.
- (h) Fremont Road from Arastradero Road to Edith Road.
- (i) Edith Road.

SECTION 5. If any section, subsections, sentence, clause or phrase of this ordinance is for any reason held to be invalid or unconstitutional, such decision shall not affect the validity of the remaining portions hereof. The City Council hereby declares that it would have passed this ordinance and each section, subsections, sentence, clause and phrase thereof, irrespective of the fact that any one or more sections, subsections, sentence, clauses and phrases to be declared invalid or unconstitutional.

RESOLUTION NO. 466

A RESOLUTION OF THE CITY OF THE TOWN OF LOS ALTOS HILLS
URGING THE STATE OF CALIFORNIA, DIVISION OF HIGHWAYS,
TO RECOGNIZE THE TOWN OF LOS ALTOS HILLS ORDINANCE NO. 131,
WHICH PROHIBITS TRUCKS ON THE JUNIPERO SERRA FREEWAY,
ON A TEMPORARY BASIS.

WHEREAS, the Town of Los Altos Hills has duly adopted Ordinance No. 131,
banning trucks on the Junipero Serra Freeway, Interstate #280, and

WHEREAS, the State of California Division of Highways must recognize
said Ordinance prior to enforcement thereof, and

WHEREAS, the State of California has indicated a desire to study the
Town's Ordinance after the opening of additional segments of said freeway,
and

WHEREAS, the completion of said segment of the freeway and the study
may be two years or more in the future, and

WHEREAS, the Town of Los Altos Hills is presently burdened with the
noise of trucks on said freeway when it is unnecessary, and

WHEREAS, an alternative route for trucks exists which is more conducive
to trucking, and

WHEREAS, the Town is presently working with State and Federal officials
on methods of sound control on freeways and needs further time to complete
said study, and

WHEREAS, the proposed landscaping of said freeway will be completed and
matured in a two year period,

NOW THEREFORE, the Council of the City of the Town of Los Altos Hills
resolves as follows:

1. That the State of California Division of Highways is
urged to recognize and approve Town Ordinance No. 131
on a temporary basis prior to the commencement of a
study on the feasibility of permanently prohibiting
trucks on the Junipero Serra Freeway, Interstate #280.

I HEREBY CERTIFY that the foregoing is a full, true, and correct copy of a resolution duly passed and adopted by the City Council of the Town of Los Altos Hills, California, at a regular meeting held on June 17, 1968, by the following roll call vote:

AYES: Councilmen Benson, Davey, Fowle, Mayor Aiken.

NOES: None.

ABSENT: Councilman Helgesson.

ATTEST:

Dennis R. Baker
City Clerk

APPROVED:

Walter D. Aiken
Mayor

SECTION 6. Any person violating any of the provisions of this ordinance shall be guilty of a misdemeanor and shall be punished by a fine not exceeding \$500.00 or by imprisonment for a period not exceeding six (6) months or by both such fine and imprisonment.

SECTION 7. This ordinance shall be posted in three (3) public places within the Town of Los Altos Hills and shall become effective thirty (30) days after its adoption.

* * * * *

The foregoing Ordinance was introduced at a regular meeting of the City Council of the Town of Los Altos Hills on January 15, 1968, and was thereafter, at a regular meeting of said Council, held on the 5th day of February, 1968, passed and adopted by the following roll call vote:

AYES: Councilmen Aiken, Benson, Davey, Fowle, Mayor Henley
NOES: None
ABSENT: None

ATTEST:

/S/ DENNIS R. LAHR
City Clerk
Town of Los Altos Hills

APPROVED:

/S/ ALBERT T. HENLEY
Mayor
Town of Los Altos Hills

2/5/68

*The foregoing Document is Certified
to be a correct copy of the
original on file in this office
Dennis R. Lahr
City Clerk, Town of Los Altos Hills
By Dennis R. Lahr
Dated: March 22, 1968*

promulgate all such rules and regulations as may be necessary to prohibit heavy truck traffic upon said Interstate Route 280, Junipero Serra Freeway, and

BE IT FURTHER RESOLVED that the City Clerk shall forward a certified copy of this Resolution to the State Highway Engineer.

* * * * *

I hereby certify that the foregoing is a full, true, and correct copy of a resolution duly passed and adopted at a ^{adjourned} regular/meeting of the City Council of the Town of Los Altos Hills held on July 11, 1967, by the following roll call vote:

AYES: Councilmen Benson, Davey, Fowle, Mayor Henley

NOES: None

ABSENT: Councilman Aiken

APPROVED:

Robert N. Henley
Mayor

ATTEST:

Jeanette L. Morgan
City Clerk