

UP-TP Cordon Trends(1963 to 1969)
C.l.d. L.A. CBD

City of Los Angeles
Department of Traffic

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Central Business District
Cordon Trends

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The attached summarizes the results of a study of traffic trends in the Central Business District between 1963 and 1969.

This bulletin was prepared from the information contained in the report Cordon Count-Downtown Los Angeles - 1969 which you have received.

S. S. Taylor
S. S. TAYLOR
City Traffic Engineer

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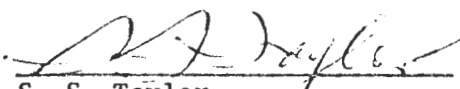
Bulletin
April 29, 1970

Central Business District Cordon Trends

Submitted:


L. L. Clearwater
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Approved:


S. S. Taylor
City Traffic Engineer

Downtown Traffic Volumes

Vehicular traffic in the downtown area is increasing. This increase shows the linear relationship between downtown surface street traffic volumes and traffic volumes of the paralleling freeways.

The screenline technique to study traffic volumes was used on two "sides" of the downtown cordon to analyze traffic volumes on east-west and north-south streets. The Downtown Cordon Count is conducted annually by the Department of Traffic by counting vehicular traffic entering and leaving the downtown Los Angeles area. The north and west "sides" of the cordon count area traffic volumes are used in this report giving screenline data for the number of vehicles traveling north-south across Temple Street and the number of vehicles traveling east-west across Figueroa Street as shown in Figure 3. To get a complete picture of the trend in east-west and north-south traffic volumes, the screenlines must be extended to include traffic on the paralleling freeways.

Analysis of traffic on 9 north-south surface streets in the downtown area shows an average annual increase in volume of 1.5 per cent since 1963. The adjacent, paralleling Harbor Freeway shows an average annual increase of 0.6 per cent during that period for freeway travel in the same direction. In 1969, the 9 north-south surface streets and the Harbor Freeway had an average daily traffic of 344,000 vehicles and an average annual growth rate of 1.0 per cent. Most of the increase in north-south travel has been absorbed by the surface streets. (See Tables 1 and Figure 1)

The 21 east-west surface streets were analyzed west of Figueroa Street and shows a 0.2 per cent annual decrease in traffic. This decrease can, in part, be attributed to the fact that many downtown surface streets are operating at capacity. Another factor causing the reduction in east-west surface street traffic is the combined increase in capacity on the paralleling Hollywood and Santa Monica Freeways. These freeways carrying vehicles in the east-west direction at the point of the screenline have increased in traffic volume at an average annual rate of 7.7 per cent since 1963. This increase in freeway traffic volumes is the result of extending the Santa Monica Freeway from Vermont Avenue to La Cienega Boulevard in late 1964 and then to Bundy Drive in the early part of 1965. The increase in east-west freeway capacity caused a diversion of a substantial volume of the "through" demand from downtown surface streets. (See Tables 2 and Figure 2)

Average daily traffic on 21 east-west surface streets, the Hollywood Freeway and the Santa Monica Freeway was 609,000 vehicles in 1969, and the average annual rate of growth is 3.6 per cent.

Attached:

Table 1-a	Observed Data for East-West Screenline
Table 1-b	Regression Line Characteristics for East-West Screenline
Figure 1	Graphic Representation of East-West Screenline
Table 2-a	Observed Data for North-South Screenline
Table 2-b	Regression Line Characteristics for North-South Screenline
Figure 2	Graphic Representation of North-South Screenline
Figure 3	Key Map

DOWNTOWN EAST-WEST SCREENLINE DATA
(South of Hollywood Freeway)

Table 1-a

Observed Volumes:

Month of Count	5-63	5-64	5-65	5-66	5-67	5-68	5-69
Surface Street Volume (veh/day)	129,100	132,000	135,000	135,000	135,000	130,200	148,500
Freeway Volume*	188,000	190,000	190,000	190,000	193,000	194,000	195,000
Grand Total	317,100	322,000	325,000	325,000	328,000	324,200	343,500
Time t (Months)	12.0	24.0	36.0	48.0	60.0	72.0	84.0

Equations of least squares regression lines for above observed volume:

$$V_{\text{Surface}} = 127,100 + 163t$$

$$V_{\text{Freeway}} = 186,900 + 95t$$

$$V_{\text{Total}} = 314,000 + 258t$$

Table 1-b

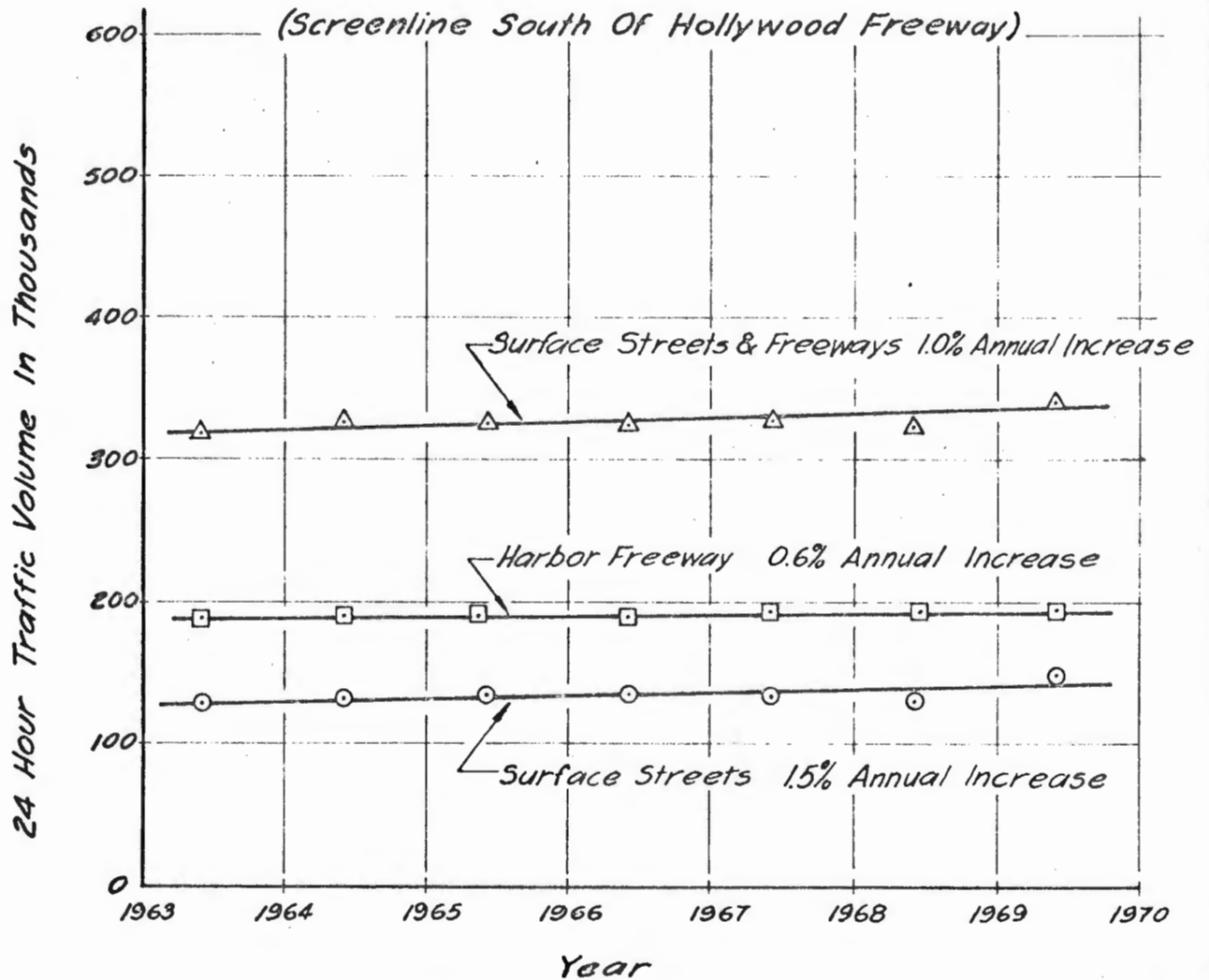
From Regression Lines:

	Volume at t = 84.0	Volume at t = 12.0	Total Change in Volume	Total % Change	Annual Increase
Surface Street	140,800	129,100	11,700	9.10%	1.52%
Freeways	194,800	188,000	6,800	3.64%	0.61%
Total (Sur. + Frwy.)	335,600	317,100	18,500	5.86%	0.98%

$$\frac{\text{Total \% Change}}{6 \text{ yrs.}} = \text{Annual Increase}$$

*SOURCE: State of California, Business and Transportation Agency, Department of Public Works, Division of Highways.

Downtown Traffic Volumes Across East - West Screenline



Surface Streets Included:

Figuerroa St.	Broadway
Harbor Fwy. Ramps	Spring St.
Hollywood Fwy. Ramps	Main St.
Grand Ave.	Los Angeles St.
Hill St.	

Freeways Included:

Harbor Frwy.

Downtown Traffic Volume Trends



City of Los Angeles

DEPARTMENT OF TRAFFIC

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Figure 1

DOWNTOWN NORTH-SOUTH SCREENLINE DATA
(East of Harbor Freeway)

Table 2-a

Observed Volumes:

Month of Count	5-63	5-64	5-65	5-66	5-67	5-68	5-69
Surface Street Volume (veh/day)	268,200	272,200	262,000	261,000	251,700	266,600	270,500
Freeway Volume*	245,000	252,000	308,000	323,000	330,000	342,000	358,000
Grand Total Sur. + Freeway	513,200	524,200	570,000	584,000	581,700	608,600	628,500
Time t (Months)	12.0	24.0	36.0	48.0	60.0	72.0	84.0

Equations of least squares regression lines for above observed volume:

$$V_{\text{Surface}} = 266,600 - 45t$$

$$V_{\text{Freeway}} = 231,000 + 1,610t$$

$$V_{\text{Total}} = 497,600 + 1,565t$$

Table 2-b

From Regression Lines:

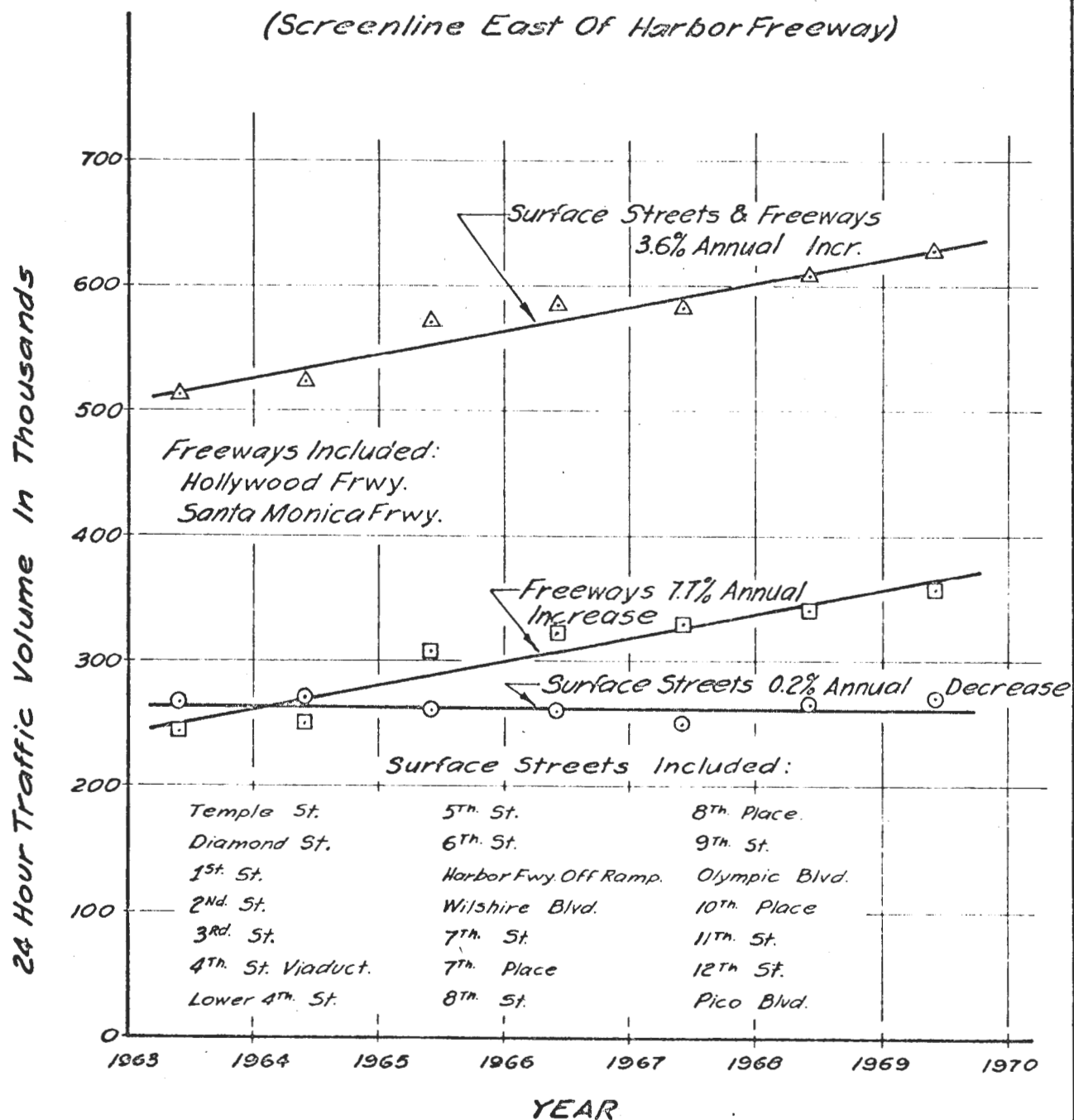
	Volume at t = 84.0	Volume at t = 12.0	Total Change in Volume	Total % Change	Annual Increase
Surface Street	262,800	266,100	-3,300	-1.22%	-0.20%
Freeways	366,200	250,300	115,900	46.37%	7.73%
Total (Sur. + Frwy.)	629,000	516,400	112,600	21.86%	3.64%

$$\frac{\text{Total \% Change}}{6 \text{ yrs.}} = \text{Annual Increase}$$

*SOURCE: State of California, Business and Transportation Agency, Department of Public Works, Division of Highways.

Downtown Traffic Volumes Across North - South Screenline

(Screenline East Of Harbor Freeway)



Downtown Traffic Volume Trends

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Figure 2

DOWNTOWN TRAFFIC VOLUME TRENDS

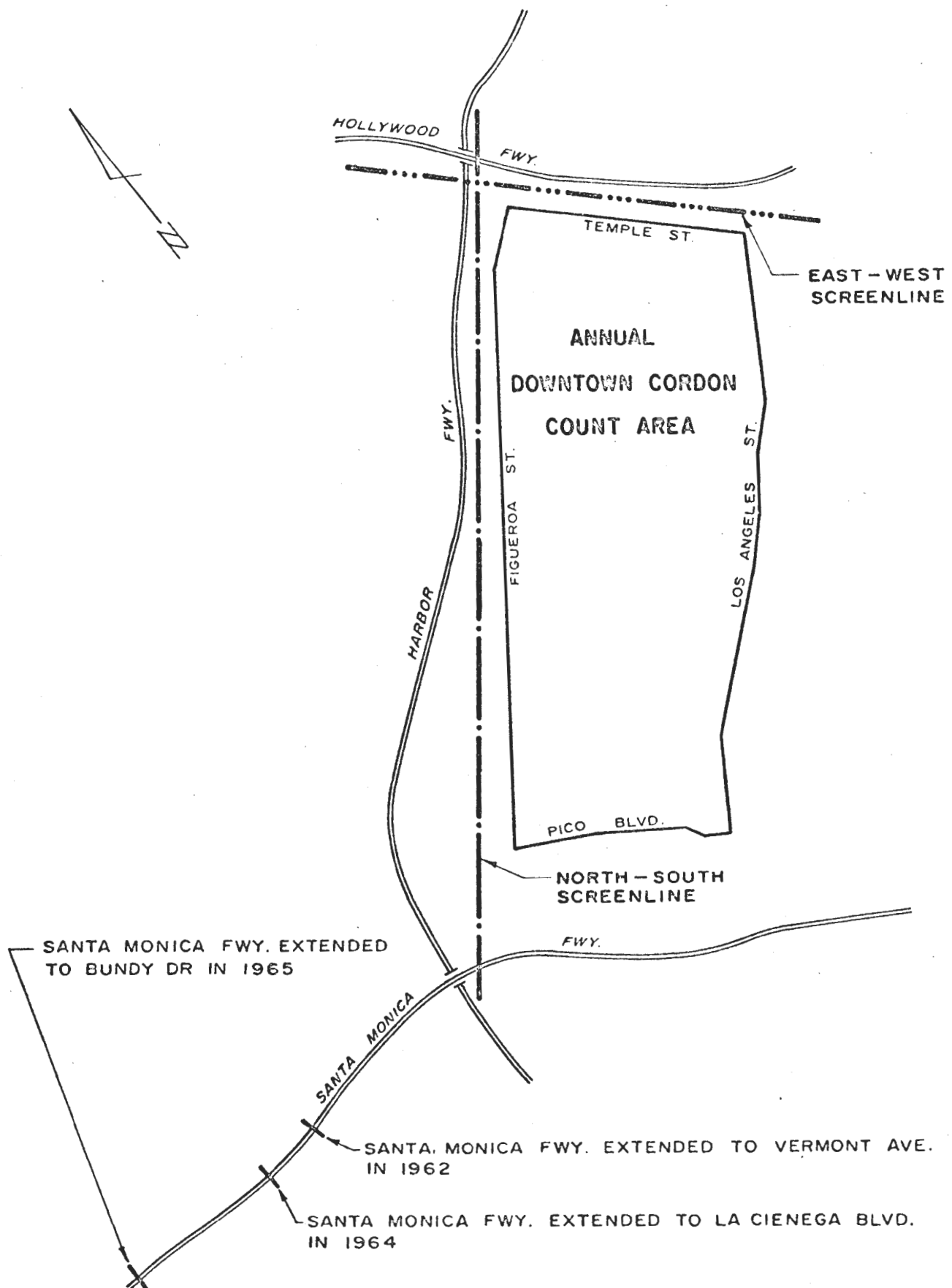


Figure 3