



# CITY OF SACRAMENTO

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TRAFFIC ENGINEERING DIVISION  
1023 J STREET — SUITE 202 SACRAMENTO, CALIF. 95814

CITY MANAGER'S OFFICE  
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February 20, 1980

City Council  
Sacramento, California

Honorable Members in Session:

SUBJECT: Undulations

## SUMMARY

We have completed our study of 80 candidate streets in the City which initially appeared to meet the requirements for the installation of undulations. These were prioritized according to a warrant criteria that took into account three major factors: The overall length of the street segment, the average daily traffic volume, and the percentage of traffic exceeding the speed limit for that street. The top twenty locations, with their respective warrant characteristics, are submitted herewith for your consideration.

## BACKGROUND INFORMATION

After considering our previous report of December 26, 1979, regarding the installation of undulations on Sandburg Drive, the Council directed the staff to study appropriate locations throughout the City where such measures for controlling speeding might be feasible. A preliminary survey showed that there were over one hundred streets where the lengths of segments were such that speeding appeared to be a potential problem. Some of these streets, however, were not primarily residential in character. To establish a set of criteria from which a warrant listing could be prioritized, we set forth these basic requirements:

1. It must be primarily a neighborhood collector street.
2. It should be 75% or more residential.
3. It should be 1500 feet or more in length, and
4. All intersections must be "T" intersections.

With these requirements, we reduced the list of candidate locations to eighty streets, of which a comprehensive warrant study was made. As noted, the criteria used for this study considered three main factors:

1. The length of the street...for which a range of 1,000' - 6,000' was used, assigning a point value of "0" for 1,000' and "100" for 6,000'. This then permitted an assignment of 1 point for each 50' of street length over 1,000'.
2. The average daily traffic volume...for which a range of 0 - 5,000 was used, assigning 1 point for every 50 vehicles counted in a 24-hour period.
3. The percentage of vehicles in excess of the speed limit...for which 1 point was assigned for every percentage point of traffic determined by our radar study to be "speeding." This means the percentage of vehicles over 25 miles per hour unless a higher limit was posted.

With the point values used from this set of criteria, it can be seen that the maximum theoretical point total would be 300. In actuality, the highest number of points attained by any street surveyed as part of this study was 255...for Moddison Avenue, between Carlson Drive and Erlewine Circle. The least number of points attained was 47. The mean for all 80 streets surveyed was 116.2. We have chosen to list the top twenty locations for your consideration and these are attached as a technical addendum to this report.

#### FINANCIAL DATA

Based on our previous experience with the undulations installed on Sandburg Drive, we estimate the cost per set at about \$1,500, including signs and markings. We suggest that future undulations be installed by contract, but still to be resolved is the matter of financing these projects. Two alternatives seem appropriate: either through General Funds or by special Assessment Districts.

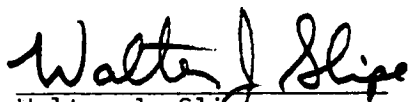
#### RECOMMENDATION

- A. That a staged implementation program be adopted, according to the prioritization indicated in the attached warrant listing.
- B. That only street segments having a warrant point total of 150 or more be scheduled for future installation of undulations.
- C. The staff continue to develop undulation designs that provide the maximum possibility for reducing speeds on neighborhood collector streets.

Respectfully submitted,

  
L. M. Frink  
Traffic Engineer

Recommendation Approved:

  
Walter J. Slupe  
City Manager

LMF/mf  
Attachment

February 26, 1980  
All Districts

WARRANT STUDY

UNDULATIONS

PRIMARY STREETS	SEGMENTS		LENGTH		VOLUME		SPEED		TOTAL POINTS
			FEET	POINTS	ADT NO.	POINTS	% OVER	POINTS	
Moddison Avenue	Carlson Drive	Earlwine Circle	5,850	97	3,037	61	96.5	97	255
Amherst Street	Florin Road	Meadowview Road	5,900	98	1,857	37	76.8	77	212
Wissemann Drive	Folsom Boulevard	Merribrook Drive	1,650	13	4,351	87	90.6	91	191
Karbet Way	Riverside Boulevard	25th Avenue/Seamas	3,200	44	2,485	50	89.1	89	183
29th Street	Donner Way	Sutterville Road	2,600	32	4,420	88	55.0	55	175
14th Street	43rd Avenue	So. Land Park Drive	2,150	23	2,024	40	100.0	100	163
Perry Avenue	49th Street	Stockton Boulevard	2,800	36	1,809	36	86.1	86	158
29th Street	Gardendale	Loma Verde Way	2,000	20	3,212	64	74.0	74	158
Bell Avenue	Norwood Avenue	End of Bell Avenue	3,250	45	1,179	24	87.1	87	156
26th Avenue	24th Street/WPRR	Franklin Boulevard	2,200	24	3,396	68	63.5	64	156
Fairbanks Avenue	Western Avenue	Norwood Avenue	2,850	37	1,710	34	84.0	84	155
68th Avenue	Putnam Way	21st Street	2,500	30	1,716	34	90.2	90	154
Farmdale Way	So. Land Park Drive	Branwood Way	3,700	54	545	11	88.0	88	153
Scripps Drive	University Avenue	American River Drive	1,800	16	3,049	61	76.1	76	153
Wilkinson Street	38th Avenue	Fruitridge Road	2,100	22	2,033	41	87.5	88	151
68th Avenue	Tamoshanter Way	24th Street	1,800	16	1,780	36	96.9	97	149
Los Robles Boulevard	Marysville Boulevard	Del Paso Boulevard	3,100	42	652	13	91.5	92	147
Morey Avenue	Norwood Avenue	Western Avenue	3,400	48	378	7	90.2	90	145
Matson Drive	Tamoshanter Way	Balfour Way	1,500	10	2,124	42	92.0	92	144
North Avenue	Marysville Boulevard	Dry Creek Road	2,500	30	1,421	28	84.7	85	143



# CITY OF SACRAMENTO

## OFFICE OF THE CITY CLERK

915 I STREET

CITY HALL ROOM 203

SACRAMENTO, CALIFORNIA 95814

TELEPHONE (916) 448-5428

LORRAINE MAGANA  
CITY CLERK

### MEMORANDUM

TO: BUDGET AND FINANCE COMMITTEE

FROM: JACI PAPPAS, ACTING CITY CLERK

SUBJECT: REFERRAL OF ITEM NO. 50, AGENDA OF FEBRUARY 26, 1980

DATE: FEBRUARY 28, 1980

Pursuant to Council action, the following subject matter is referred to your committee for hearing, report, and recommendation: Undulations, City streets.

cc: City Manager  
City Engineer  
Traffic Engineer