

**CITY OF OAKLAND**  
**AGENDA REPORT**

FILED  
OFFICE OF THE CITY CLERK  
OAKLAND

2007 SEP 13 PM 3:52

TO: Office of the City Administrator  
ATTN: Deborah Edgerly  
FROM: Community and Economic Development Agency  
DATE: September 25, 2007

RE: **Resolution Approving The Traffic Signal Priority List And The  
Pedestrian Priority Signal List For The Top Ten (10) Intersections  
Citywide, Pursuant To City Council Resolution No. 78747 C.M.S**

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**SUMMARY**

Staff has prepared a resolution approving the top ten locations for both traffic signal and pedestrian signal installations, and identifying the top four locations for traffic signal installation, and the top two locations for pedestrian signal installation as approved in the FY 2007-2009 Adopted budget. The respective signal priority lists for the top ranked 30 locations citywide are presented in this report for information and discussion.

The City's existing traffic signal system currently consists of over 650 signalized locations. Traffic signals are added upon identified need in the areas of vehicular, pedestrian and bicycle safety, as well as improving traffic flow and access. Traffic signals are safety devices whose primary purpose is to assign right-of-way to motorized vehicles, pedestrians and bicyclists, minimizing conflicts among road users while improving and controlling traffic flow.

**FISCAL IMPACT**

There is no fiscal impact as the result of this report and resolution. Funding for two traffic signals (\$600,000.00) and one pedestrian safety signal (\$300,000.00) is included in the 2007-2009 adopted budget, under the Community Economic and Development Agency, Transportation Services Division Capital Improvement Program, Measure B Sales Tax Fund (2211) and Fund (2212). Additional signals may be funded from state and federal grants, or to mitigate the impacts of specific developments.

Staff time for project development is included within the annual operating budget, and is provided by Multi Purpose Reserve Fund (1750), Transportation Services Organization (30262), Account (51111), and Program NB33.

Item: \_\_\_\_\_  
Public Works Committee  
September 25, 2007

## **BACKGROUND**

As traffic volumes increase beyond the capability of lesser controls such as stop signs, it may be necessary to install a traffic signal. Engineering standards have been developed over the years to guide the selection of intersections that would most benefit from a signal. Before installing a traffic signal at an intersection, established minimum criteria must be satisfied. These include:

- The amount of vehicular and pedestrian traffic
- The need to interrupt traffic on the major street so traffic and pedestrians from side streets can safely enter and cross
- The collision history of the intersection
- Special conditions, such as hills and curves or unusual intersection geometry

Signals offer the maximum flexibility for control at intersections. They relay messages of both what to do and what not to do. The primary function of any traffic signal is to assign right-of-way to conflicting movements of traffic at an intersection. This is done by permitting conflicting streams of traffic to share the same intersection by means of time separation. By alternately assigning right of way to various traffic movements, signals provide for the orderly movement of conflicting flows. They may interrupt extremely heavy flows to permit the crossing of pedestrians and minor movements that could not otherwise move safely through an intersection.

When properly timed, traffic signals can increase the traffic handling capacity of an intersection. When installed under conditions that justify their use, signals are a valuable device for improving the safety and efficiency of both pedestrian and vehicular traffic. In particular, signals may reduce certain types of accidents, most notably right-angle (broadside) collisions.

## **KEY ISSUES AND IMPACTS**

Request for traffic signals are made by the City's residents and general public for specific locations. The requests are evaluated using the City's signal need priority system. Through the application of the signal need priority system, locations are assigned points and then ranked in comparison with other locations where signals are requested. The priority system allows staff to keep all requests for signals on a list that has grown to more than 300. The top 30 locations have been recently reevaluated and ranked. In addition, Caltrans signal warrants have been applied to the top 10 locations to show consistency with the current State guidelines. The top 10 locations meet the State signal warrants.

Staff regularly programs two traffic signals and one pedestrian signal per year from the priority lists and submits them for funding as part of the biennial budget process. Staff is now requesting that the City Council adopt the list of the top 10 locations in each category and direct staff to proceed with implementation for the Fiscal Years 2007-2009. Should other funding opportunities become available prior to the next budget cycle, staff would proceed with implementation of locations in rank order.

There are also other programs that install traffic signals. Regional, state and federal grants occasionally provide funding for traffic control devices, including traffic signals, for specific programs, such as the Safe Routes to School (SRS), Hazard Elimination or Office of Traffic Safety grant programs. As these opportunities arise, staff will report to Council and make recommendations for candidate locations that meet specific grant criteria.

Lastly, traffic signals are installed by developers to mitigate impacts associated with private development projects. These signals are identified during the development review process through required environmental and traffic studies.

## **PROGRAM DESCRIPTION**

### **Prioritization of Traffic Signals**

The City's traffic signals are prioritized based on the following criteria, in accordance with established traffic engineering standard practice and the guidelines from the Caltrans Manual of Uniform Traffic Control Devices (MUTCD):

- 1) Vehicular volumes, 10 points
- 2) Interruption of continuous traffic, 5 points
- 3) Pedestrian volumes, 5 points
- 4) Accident data, 7 points
- 5) Other, site specific special conditions<sup>1</sup>

Locations are ranked based upon the total point score out of the maximum total of 27 points. The top 30 locations have been recently reevaluated and ranked, and are presented in Attachment 'A'. In addition, Caltrans signal warrants<sup>2</sup> have been applied to the top 10 locations to ensure consistency with the current state guidelines. Signal warrants are a "pass-fail" method of evaluating the need for a signal at an intersection. They do not, however, provide a relative ranking. The installation of traffic signals at unwarranted locations can be counterproductive, by increasing traffic delay without significant safety improvement. The top 10 locations all meet Caltrans signal warrants.

### **Prioritization of Pedestrian Signals**

Pedestrian signal locations are prioritized based on a ten-year pedestrian accident history, which is presented in Attachment 'B'.

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<sup>1</sup> Special conditions may include unusual intersection configuration or topography. No points are assigned, but this criterion may serve as a tie-breaker in the case of two locations with equivalent numerical scores.

<sup>2</sup> A warrant describes threshold conditions used in evaluating the potential safety and operational benefits of traffic control devices and is based upon average or normal conditions. Warrants are not a substitute for engineering judgment. The fact that a warrant for a particular traffic control device is met is not conclusive justification for the installation of the device.

## **SUSTAINABLE OPPORTUNITIES**

**Economic:** Traffic signal projects have a positive impact on the local economy by providing jobs for local business, and by improving pedestrian and vehicular safety with the associated costs of injuries and property damage.

**Environmental:** The City's construction contract guidelines encourage the use of recyclable materials and waste reduction. The project will improve pedestrian safety and encourage walking, thereby reducing vehicle emissions, noise pollution, and fuel consumption.

**Social Equity:** Traffic signal projects will provide greater accessibility and safety to persons who depend on walking and public transit to access jobs and services, such as senior citizens, persons with disabilities, and children.

## **DISABILITY AND SENIOR CITIZEN ACCESS**

Traffic signals include accessibility improvements such as tactile pedestrian pushbuttons with audible units and wheelchair ramps with detectable warning domes to assist persons with disabilities and seniors.

## **RECOMMENDATION AND RATIONALE**

Staff recommends that the City Council approve the top ten locations for both traffic signal and pedestrian signal installations. Staff will proceed with implementation of the top four traffic signal locations and the top two pedestrian signal locations as approved in the FY 2007-2009 Adopted budget.

**ACTION REQUESTED OF THE CITY COUNCIL**

Staff recommends that the City Council approve the resolution.

Respectfully submitted,



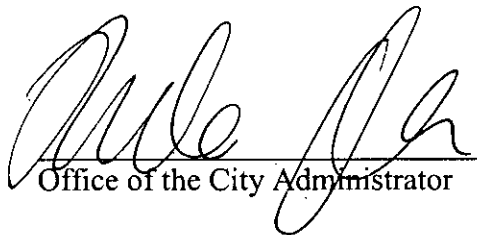
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Claudia Cappio  
Development Director  
Community and Economic Development Agency

Reviewed by:  
Michael J. Neary, P.E.  
Deputy Director, Community and Economic  
Development Agency

Prepared by:  
Adc Oluwasogo, P.E.  
Supervising Transportation Engineer  
Transportation Services Division

**APPROVED AND FORWARDED TO THE  
PUBLIC WORKS COMMITTEE:**



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Office of the City Administrator

Item: \_\_\_\_\_  
Public Works Committee  
September 25, 2007

**ATTACHMENT A**  
**CURRENT SIGNAL NEEDS PRIORITY LIST**

RANK	MAJOR STREET	CROSS STREET	SCORE	COUNCIL DISTRICT
1	SEMINARY	AVENAL	23.1	6
2	INTERNATIONAL BLVD	50TH AVE	21.1	5
3	FRUITVALE AVENUE	SCHOOL	19.9	5
4	INTERNATIONAL BLVD	81ST AVE	19.5	6, 7
5	FOOTHILL	34TH AVE , NORTH INT.	19.5	5
6	COLLEGE AVENUE	CHABOT	19.2	1
7	MACARTHUR	MAYBELLE	19.0	4
8	INTERNATIONAL BLVD	3RD AVE	18.8	2
9	INTERNATIONAL BLVD	64TH AVE	17.8	6
10	INTERNATIONAL BLVD	55TH AVE	17.7	5, 6
11	INTERNATIONAL BLVD	26TH AVE	17.2	5
12	BANCROFT AVE	94TH	16.9	7
13	FOOTHILL	64TH AVE	16.6	6
14	PARK BLVD	8TH AVE-MCKINLEY	16.4	2
15	FRUITVALE AVENUE	E-16TH ST, SOUTH INT.	16.3	5
16	MACARTHUR	BYRON/FOOTHILL	16.3	7
17	35TH AVE	SCHOOL	16.2	4
18	INTERNATIONAL BLVD	39TH AVE	16.1	5
19	HARRISON	29TH ST	16.0	3
20	ADELINE	35TH ST	15.8	3
21	SAN PABLO AVENUE	66TH ST	15.8	1
22	HIGH	CARRINGTON	15.8	4
23	PARK BLVD	E-28TH ST	15.7	2
24	INTERNATIONAL BLVD	54TH AVE	15.6	5
25	SAN PABLO AVENUE	34TH ST	15.1	3
26	BANCROFT	96TH AVE	15.1	7
27	BANCROFT	DURANT	15.1	7
28	ADELINE	36TH ST	14.9	3
29	WEBSTER	22ND ST	14.9	3
30	REDWOOD RD	LINCOLN SHOPPING CNTR	14.8	4/6

**ATTACHMENT B  
PEDESTRIAN SIGNAL NEED PRIORITY LIST**

<b>RANK</b>	<b>MAJOR STREET</b>	<b>CROSS STREET</b>	<b>No. of Collisions involving Pedestrians</b>	<b>Council District</b>
1	International Blvd	36th Ave	9	5
2	Foothill Blvd	34th Ave	7	5
3	International Blvd	26th Ave	7	5
4	Porter St	High St	7	4
5	Webster St	7th St	7	2
6	Foothill Blvd	33rd Ave	6	5
7	Foothill Blvd	5th Ave	6	2
8	Harrison St	9th St	6	2
9	International Blvd	20th Ave	6	5
10	International Blvd	39th Ave	6	5
11	Lakeshore Ave	Beacon St	6	2
12	2nd Ave	E. 12th St	5	2
13	Foothill Blvd	36th Ave	5	5
14	Foothill Blvd	41st Ave	5	5
15	Fruitvale Ave	Farnam St	5	5
16	Harrison St	12th St	5	2
17	Howe St	41st St	5	1
18	International Blvd	14th Ave	5	2
19	International Blvd	37th Ave	5	5
20	MacArthur Blvd	89th Ave	5	7
21	MacArthur Blvd	Champion St	5	4
22	Mountain Blvd	La Salle Ave	5	4
23	Rand Ave	Lake Park Ave	5	2
24	Staten Ave	Grand Ave	5	3
25	Telegraph Ave	23rd St	5	3
26	5th Ave	E. 10th St	4	2
27	Bancroft Ave	50th Avenue	4	6
28	Colby St	Alcatraz Ave	4	1
29	College Ave	63rd Street	4	1
30	Foothill Blvd	25th Ave (West)	4	5

# OAKLAND CITY COUNCIL

*[Signature]*  
City Attorney

FILED  
OFFICE OF THE CITY CLERK  
OAKLAND

2007 SEP 13 PM 3:52  
**RESOLUTION No. \_\_\_\_\_ C.M.S.**

Introduced by Councilmember \_\_\_\_\_

**RESOLUTION APPROVING THE TRAFFIC SIGNAL PRIORITY LIST AND THE PEDESTRIAN PRIORITY SIGNAL LIST FOR THE TOP TEN (10) INTERSECTIONS CITYWIDE, PURSUANT TO CITY COUNCIL RESOLUTION NO. 78747 C.M.S**

**WHEREAS**, the residents and the general public request traffic and pedestrian signals at many intersections citywide; and

**WHEREAS**, staff periodically evaluates requests for traffic and pedestrian signals and assigns points according to the City's signal warrant and priority system pursuant to the City Council Resolution No. 78747 C.M.S., as well as a ten-year pedestrian accident history; and

**WHEREAS**, over 300 intersections exist on the signal need priority list; and

**WHEREAS**, the top 30 intersections have been recently evaluated and ranked; and

**WHEREAS**, the top 10 intersections have been identified as candidates for consideration for signalization for the Fiscal Years 2007-2009; now, therefore be it

**RESOLVED:** That the lists of the top ten intersections needing traffic signals and pedestrian signals are hereby adopted; and be it

**FURTHER RESOLVED:** That the Community and Economic Development Agency, Transportation Services Division is directed to implement the top four traffic signal and the top two pedestrian signal locations, as budgeted in the adopted 2007-2009 policy budget; and be it

**FURTHER RESOLVED:** That staff shall continue to periodically evaluate intersections and present to the City Council a prioritized list of locations identified for traffic or pedestrian signals for funding and implementation.

IN COUNCIL, OAKLAND, CALIFORNIA, \_\_\_\_\_, 20\_\_

**PASSED BY THE FOLLOWING VOTE:**

AYES – BROOKS, BRUNNER, CHANG, KERNIGHAN, NADEL, QUAN, REID, AND PRESIDENT DE LA FUENTE

NOES –

ABSENT –

ABSTENTION –

ATTEST: \_\_\_\_\_

LaTonda Simmons  
City Clerk and Clerk of the Council  
of the City of Oakland, California