REPORT TO COUNCIL
City of Sacramento

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STAFF
July 31, 2007

Honorable Mayor and
Members of the City Council

Title: Transportation Programming Guide

Location/Council District: Citywide

Recommendation: Receive and file

Contact: Saed Hasan, Senior Engineer, (916) 808-7923; Tim Mar, Supervising Engineer, (916) 808-7531
Presenters: Saed Hasan, Hector Barron, Ed Cox
Department: Transportation
Division: Engineering Services
Organization No: 3434

Description/ Analysis

Issue: The Transportation Programming Guide (TPG) is a comprehensive document that prioritizes the City's transportation projects to provide the City Council with information when making project funding decisions. Transportation projects are ranked according to criteria that are approved by City Council. Criteria are developed and updated to reflect the City's current policies and priorities. The proposed criteria modifications for the 2008 TPG are intended to reflect the City's strategic plan goal and policies.

Staff is recommending making changes to different sections of the current TPG including the Traffic Signal, Major Streets, Streetscape Enhancements, Speed Humps, and Sidewalks to School sections. Staff is also recommending creating a new Pedestrian Section in the TPG as recommended in the approved Pedestrian Master Plan.

Policy Considerations: The proposed criteria changes and new sections are consistent with the City's Strategic Plan goals of improving public safety and enhancing livability. The proposed new Pedestrian Section of the TPG is consistent with the recommendations in the City Council adopted Pedestrian Master Plan.

Environmental Considerations: The requested action is not subject to the provisions of the California Environmental Quality Act (CEQA) under the general rule (Section 15061 (b)(3)) that CEQA applies only to projects that have the potential for causing a significant effect on the environment.

Rationale for recommendation: Modifying the scoring criteria and creating a new section in the 2008 TPG will better reflect the City's adopted policies and provide guidance to City Council when making funding decisions.

Financial Considerations: There are no financial considerations associated with this report. The TPG is not a financing document, but is a tool used to assist in identifying and prioritizing the City's transportation needs and the subsequent programming of transportation funds.

Emerging Small Business Development (ESBD): None, since no goods or services are being procured with this action.

Respectfully Submitted by: _____
Nicholas Theocharides
Engineering Services Manager

Approved by: _____
Jerry Way
Director of Transportation

Recommendation Approved:

_____
RAY KERRIDGE
for City Manager

Table of Contents:

	Report	Pg	1
Attachments			
1	Background	Pg	4
2	Changes to Major Street and Streetscape Enhancement Sections	Pg	6
3	Changes to Speed Hump Program and Section	Pg	9
4	Changes to Traffic Signal Section	Pg	26
5	Pedestrian Improvement Section	Pg	40
6	Presentation	Pg	46

Attachment 1

Background Information:

The Transportation Programming Guide (TPG) is a comprehensive document that outlines the City's current and future transportation needs. The TPG serves several purposes including: summarizing the City's transportation programs and projects; establishing program and project priorities; and providing the City Council with information when making project funding decisions. Staff is currently in the process of updating the scoring criteria and soliciting new project ideas for the 2008 TPG. The update will also reflect the 2007 5-year Economic Development Strategy approved by City Council on May 29, 2007.

TPG Process

The TPG process is divided into several tasks including: developing project scoring criteria for each program area; scoring and ranking projects; and writing the final text of the document. Staff is currently in the process of revising the scoring criteria. Throughout the TPG process, staff continues to work with the TPG Community Advisory Committee (CAC), a staff working group, and the community. The staff working group consists of representatives from Planning, Economic Development, Traffic Engineering, Street Maintenance, and the Sacramento Housing and Redevelopment Agency (SHRA). Ultimately the City Council approves changes to the scoring criteria and the scored and ranked project list.

Community Outreach and Input

Community Outreach for revising and updating the criteria for the 2008 TPG included presentations to the Neighborhood Service Area Leadership Groups, the BAC, and the City Planning Commission. In addition, an open house, focused on the TPG, was held on March 7, 2007.

Existing TPG Sections

The TPG is divided into eleven sections that reflect transportation project categories. The sections are:

- Major Street Improvements
- Street Maintenance
- Street Reconstruction
- Traffic Signals
- Alternate Modes
- Bridge Replacement and Rehabilitation
- Streetscape Enhancements
- Sidewalks to Schools
- Speed Humps

- Train Horn Quiet Zone
- Development Driven (projects listed, but not scored and ranked)

Proposed Changes

The TPG staff working group, working with the TPG CAC, is proposing changes to the following sections:

- Major Streets Improvements – Minor changes to the Alternate Modes Criteria and Economic Development Criteria (see Attachment 2).
- Streetscape Enhancements - Minor changes to the Alternate Modes Criteria and Economic Development Criteria (see Attachment 2).
- Speed Hump – Changes to street eligibility and public outreach requirements, changes to allow use of speed tables, and changes to allow for converting speed humps to speed lumps at the request of the Fire Department (see Attachment 3).
- Traffic Signal – Changes to the project list development process and to the criteria (see Attachment 4).
- Sidewalks to Schools – Merge this section into the new Pedestrian Section (see Attachment 5).
- Alternate Modes – Change the name of the section to Bicycle Section.
- Street Reconstruction – Minor changes to Economic Development Criteria.

New Section

The TPG staff working group is proposing a new Pedestrian Section be added to the 2008 Transportation Programming Guide in accordance with recommendations in the Pedestrian Master Plan that was approved by City Council on July 25, 2006. The draft criteria are included in Attachment 5 of this report.

Attachment 2

Proposed change to Major Streets Section, Alternate Modes Criteria

~~Alternate Modes~~*Bicycle, Pedestrian, and Transit* ..... (Max Points: 10)

4 points	given for streets identified as a designated Class 2 or 3 bikeway (existing or proposed) in the City/County Bikeway Master Plan
4 points	given if the project is on a bus route
4 points	*given if the project adds sidewalk where there currently is none*
6 points	given if the project improves access to a LRT station or to a commuter rail station ~~for pedestrians, bicyclists, vehicles or buses~~

Proposed change to Streetscape Enhancement Section, Alternate Modes Criteria

Bicycle, Pedestrian, and Transit ..... (Max Points: 15)

5 points	*given if there has been a collision involving a pedestrian during the previous three years along the street segment being evaluated*
~~6~~ *5* points	given for streets identified as a designated Class 2 or 3 bikeway (existing or proposed) in the City/County Bikeway Master Plan
~~6~~ *5* points	given if the project is on a bus route
~~9~~ *5* points	given if the project ~~improves access to a LRT station for pedestrians,bicyclists, vehicles or buses~~*is within ½ mile of a LRT or other commuter rail station platform*

Proposed Change to Major Streets Section, Economic Development Criteria

Propose Five additional points for Economic Development Score from Congestion Score.

Economic Development ..... (Max. Points: ~~10~~*15*)

- ~~Is the project within the Economic Development Strategy?:~~
  - ~~Does the project fall within one of the nineteen (19) Neighborhood Commercial Revitalization Areas?~~
  - ~~Is the project located within one of the twenty-seven (27) Key Development Opportunity Areas or Sites?~~
  - ~~Is the project located in either the Merged Downtown or SP/Richards Redevelopment Area?~~

~~If Yes on any of the above (5 points)~~ _____

- ~~Is the project located in a Business Improvement District (BID) or Property-Based Improvement District (PBID)?~~

_____ ~~Yes (5 points)~~ ____ ~~No (0 points)~~

- *Is the project within one of the following Economic development Strategy opportunity areas?:*
  - *The River District*
  - *J-K-L Corridor*
  - *Northgate*
  - *Midtown*
  - *Broadway*
  - *Waterfront/Dock Area*
  - *Stockton Blvd. Commercial Corridor*
  - *Folsom Blvd.*
  - *Del Paso*
  - *Power Inn*
  - *Railyards*
  - *North Natomas*
  - *North McClellan*
  - *65th Street Village*
  - *Arden Expo*
  - *Delta Shores*
  - *Florin Perkins*
  - *Any Business Improvement District (BID) or Property-Based Improvement District (PBID)*

  If Yes on any of the above (7.5 points) _____

- *Will this project stimulate economic activity by creating jobs, revenue to the City, or investment?*
  If Yes on any (7.5 points) _____

Proposed Change to Streetscape Enhancement Section, Economic Development Criteria

Propose Five additional points for Economic Development Score from Current Appearance Score.

Economic Development (Max. Points: ~~15~~*20*)

- ~~Is the project within the Economic Development Strategy?:~~
  - ~~Is the project located within one of the twenty-seven (27) Key Development Opportunity Areas or Sites?~~
  - ~~Is the project located in either the Merged Downtown or SP/Richards Redevelopment Area?~~

  ~~If Yes on any of the above (10 points)~~ _____
- ~~Is the project located in a Business Improvement District (BID) or Property-Based Improvement District (PBID)?~~

  ~~_____Yes (5 points) ____No (0 points)~~

- *Is the project within one of the following Economic development Strategy opportunity areas?:*

- *The River District*
- *J-K-L Corridor*
- *Northgate*
- *Midtown*
- *Broadway*
- *Waterfront/Dock Area*
- *Stockton Blvd. Commercial Corridor*
- *Folsom Blvd.*
- *Del Paso*
- *Power Inn*
- *Railyards*
- *North Natomas*
- *North McClellan*
- *65th Street Village*
- *Arden Expo*
- *Delta Shores*
- *Florin Perkins*
- *Any Business Improvement District (BID) or Property-Based Improvement District (PBID)*

If Yes on any of the above (10 points) _____

- *Will this project stimulate economic activity by creating jobs, revenue to the City, or investment?*
  If Yes on any (10 points) _____

Attachment 3

Proposed Summary Changes to Speed Hump Section (Program Guidelines)

The following is an overview of changes are recommended for the Speed Hump Program Guidelines.

1) Change to Curve Restrictions:

Allow speed humps in curves with radii equal to or greater than 650'. This will allow for adequate visibility and stopping sight distance. Currently, speed humps are not allowed on curves of any radii.

2) Changes to criteria for augmenting existing speed hemps:

- Use 85th percentile speed instead of the average speeds.
- Change petition signature requirement to 10 rather than 2/3rds of residents.
- Eliminate a mandatory community meeting. A petition and ballot is adequate.
- The distance between existing humps must be at least 500 feet.
- A ballot with a 25% return rate with 2/3rds in favor is required prior to installation.

3) Change to Bypass Streets:

Eliminate speed criteria from warrants. This information is not included in the ranking formula, which is based on frontage, total volumes and bypass volumes.

4) Contiguous Segments:

Eliminate the requirement that a block be 750' long when there are contiguous segments with no stop controls and all side streets entering the segments are stopped. The total length of the contiguous segments must be at least 750' in length.

5) Speed Tables:

Add speed tables to Speed Hump Program on streets posted 35 mph and with park/school frontage.

6) Conversion of Speed Hump to Speed Lumps at request of the Fire Department.

Public notification required

Proposed Changes to Speed Hump Program Guidelines

Introduction

The City of Sacramento has had a speed hump program since 1980. Over the years, several revisions have been made to the program including street length criteria, *a* change from undulations to speed humps, *a* program name change, *the addition of a* minimum speed~~ing~~ requirement and the installation of speed lumps on emergency response and bus routes. For simplicity of these guidelines, the term "speed hump" will refer not only to the traditional speed humps, but also the ~~newer~~ split hump design ~~being~~ called "speed lumps~~.~~" *and speed tables.* Designs for ~~both~~ speed humps~~, and~~ speed lumps *and speed tables* are included in these guidelines.

Definitions

Speed Bump – Single asphalt bump~~s~~ covering approximately one foot and approximately 5 inches in height. Found in shopping centers and parking lots. Not installed on public streets.

Speed Hump – Single asphalt hump, parabolic in shape, covering 12 feet of street with a height between 3 ¼ and 3 ¾ inches. Installed on streets in Sacramento since ~~1995~~*1996*. Not installed on emergency response or bus routes.

Speed Lump~~s~~ – Asphalt mounds, parabolic in shape, covering 12 feet of street with a height between 3 ¼ and 3 ¾ inches. The center mound or lump, has a width of 5 ½ feet to accommodate the wheelbase of fire trucks and buses. The lumps adjacent to the center lump vary in width to accommodate the street width. Depending on the street width, a 5 ½ foot lump may be placed in each travel lane. First testing of speed lumps in Sacramento was done in February 2000. Speed lumps have been approved by the Fire Department for use on emergency response routes and by Sacramento Regional Transit for use on bus routes.

Speed Table – An elongated hump, incorporating a 10-foot flat surface in the middle and covering a total of 22 feet of street, with a height between 3 ¼ and 3 ¾ inches. Speed tables have been installed on streets in Sacramento as part of the Neighborhood Traffic Management Program (NTMP). With the 2008 Transportation Programming Guide, they are being added to the Speed Hump Program for use on minor collector roadways with park or school frontage and posted speeds of 35 mph. Speed tables have been approved by the Fire Department for use on emergency response routes and by Sacramento Regional Transit for use on bus routes on a case by case basis.

Speed Survey – A survey of traffic speeds and volume conducted by the use of a magnetic sensor(s) or air pressure hose(s) to determine the percentage of traffic exceeding the speed limit. The speed survey shall be 24-hours in length.

Undulations – A ~~set~~ *pair* of adjacent speed humps placed on the street. Undulations were installed on Sacramento streets prior to 1995.

85th Percentile Speed – Otherwise known as the critical speed, is the speed at or below

which 85% of the traffic is moving. The 85th percentile speed is used as one of the criteria to determine if a street qualifies for speed humps.

Program Categories

The City of Sacramento has three types of speed hump categories: Residential, Parks and Schools, and Bypass. The objectives, qualifying criteria, and priority ranking system for each of these categories are presented in subsequent sections of this report. Also in this report are construction specifications, locations selection guidelines, signs and markings, relocation and removal requirements, other funding, Regional Transit, Fire Department emergency response route*s*, and public notification. Between 1980 and 1995, the city installed undulations (2 humps) for traffic calming. Since 1995, the city has installed speed humps (one hump) because it was determined that one hump was just as effective at slowing traffic as two humps, less costly and easier to find spacing for installation on streets.

Program Objectives

Speed humps serve to reduce vehicular speeds as well as to reduce cut-through traffic on local residential streets. Both of these effects are realized when speed humps are installed on a street, regardless of the type of program for which a street qualifies. The principle purpose of each of the three programs is as follows: The Residential Speed Hump list *and the Parks and Schools list* serve~~s~~ to reduce vehicular speeds on streets ~~which include~~*with residential frontage or* park and/or school frontage; and the Bypass Speed Humps list serves primarily to reduce inappropriate traffic volumes on certain streets.

Other, less costly, forms of traffic control (e.g., stop signs) should be considered the primary means of discouraging speeding and/or bypass traffic. Stop signs are less costly to install and can be installed immediately at locations which qualify. When these forms of traffic control are inappropriate, the location may be studied further to determine whether or not it qualifies for speed humps. The application of speed humps is limited to streets where geometric configuration or design fails to passively deter many drivers from exceeding the speed limit or from using streets as bypass routes. The proper application of speed humps enhances public safety.

Qualifying Criteria

In order for a residential street to be studied for speed humps, a petition from ten residents from the affected street must first be submitted.

A street *segment* qualifies for the installation of speed humps when the results of an investigation demonstrate that the criteria presented on page three of this document are met for the respective types of programs. Once a street has qualified, it will be assigned points and ranked with other qualifying streets based on the ranking system shown on page four of this document.

~~Streets, which have already qualified for one of the speed hump categories under previously established criteria shall be reevaluated in accordance with the priority~~

~~ranking system as set forth in this document.~~

Qualifying Criteria *by Category*

Residential

The segment must be 750 feet in length between traffic controls, four way intersections, and/or curves with less than a 250-foot radius.

The street is comprised of contiguous segments with no stop controls and all side streets entering the segments are stopped. The total length of the contiguous segments must be at least 750' in length.

Posted speed limit must be 30 mph or less.

Street frontage of subject street segment must be at least 75% residential.

Street will not be considered for speed humps, but will be considered for speed lumps if it is a part of the Regional Transit bus network, or identified as an emergency response route by the Fire Department.

A minimum of 25% of ballots mailed shall be returned and a two-thirds majority of residents that vote are in favor of the installation of speed humps. **

A speed survey shall indicate that the 85th percentile speed is at five or more miles per hour over the speed limit.

Parks & Schools

The segment must be 500 feet in length between traffic controls, four-way intersections, and/or curves with less than a 250-foot radius.

Posted speed limit must be 30 mph or less~~.~~ *or 35 mph when considering the placement of speed tables.*

Street segment must be adjacent to a school * or park.

Street will not be considered for speed humps, but will be considered for speed lumps if it is a part of the Regional Transit bus network, or identified as an emergency response route by the Fire Department.

A minimum of 25% of ballots mailed shall be returned and a two-thirds majority of residents that vote are in favor of the installation of speed humps. **+

A speed survey shall indicate that the 85th percentile speed is at five or more miles per hour over the speed limit.

Bypass

The segment must be 500 feet in length between traffic controls, four way intersections, and/or curves with less than a 250-foot radius.

Posted speed limit must be 30 mph or less.

Street frontage of subject street segment must be at least 75% residential.

Street will not be considered for speed humps, but will be considered for speed lumps if it is a part of the Regional Transit bus network, or identified as an emergency response route by the Fire Department.

A minimum of 25% of ballots mailed shall be returned and a two-thirds majority of residents that vote are in favor of the installation of speed humps. **

~~A speed survey shall indicate that the 85th percentile speed is at five or more miles per hour over the speed limit.~~

Minimum average daily traffic (ADT) must be 500 vehicles per day.

The street(s) must serve to bypass *** major streets with a four-way stop, a signalized intersection, or another street with speed humps.

* Preschool, Day care school, elementary, middle, or high school.

** One vote per household is allowed; voter(s) must reside at the household (whether they are owners or tenants), as they are the primary users of the street being considered for speed humps.

\+ If the survey of residents on a parks and schools street does not demonstrate a two-third majority favoring the installation of speed humps, the City Council member representing the district in which the street is located may override the survey.

*** To be considered a "bypass" location, the ADT must be at least 50% higher than the volume that would be expected using the following trip generation rates: 10-trips/day/single family residential (SFR) unit, 6-trips/day/multi family residential (MFR) unit. Land uses which do not front the bypass location itself, but which could reasonably be expected to use the bypass street(s) should be considered when determining the expected volume.

When Voting Requirement Not Met

If a street fails to receive the necessary two-thirds majority approval, the street may not be considered again for speed humps/lumps for five (5) years.

Priority Ranking System

The following point allocation method will be used in order to rank streets qualifying for the speed hump categories:

Residential

One point for every 50 vehicles traveling the street in a 24-hour study period.

One point for each residential unit fronting the street, *plus one point for each 25 feet of apartment frontage.*~~.~~

Five points for every 85th percentile speed of traffic exceeding the speed limit.

Parks & Schools

One point for every 50 vehicles traveling the street in a 24-hour study period.

One point for each residential unit fronting the street, plus one point for each 25 feet of school, park, playground, or apartment frontage.

Five points for every 85th percentile speed of traffic exceeding the speed limit.

Bypass

One point for every 50 vehicles traveling the street in a 24-hour study period.

One point for each residential unit fronting the street, plus one point for each 25 feet of apartment frontage.

One point for every 10 vehicles that are considered "bypass traffic."

Construction Specifications (Single Hump)

Upon installation of the single humps, the asphalt concrete speed hump will have a width of 12 feet, a minimum height of three and one-quarters inches and a maximum height of three and three-quarters inches (3 ¼" to 3 ¾"), and a vertical curvature of 72 feet (~~refer~~ *Refer* to ~~Figure 1~~*Pages 10 - 12*). ~~Speed~~ *The speed* hump will extend from lip of gutter to lip of gutter. There will be a two-foot (2') horizontal taper originating at the crest of the speed hump and converging at the lip of curb. Asphalt concrete shall be mixed and placed in accordance with Section 22 of the City of Sacramento Standard Specifications. ~~Page 9 is a drawing~~*(Refer to Page 10* ~~of~~ *for* the proposed speed hump cross section*)*.

Construction Specifications (Speed Lumps)

Upon installation of speed lumps, the asphalt concrete speed lumps will have a width of 12 feet, a minimum height of three and one-quarter inches and a maximum height of three and three-quarters inches (3 ¼" to 3 ¾"), and a vertical curvature of 72 feet (refer to Figure 2). The center lump (or lumps if the design requires one lump in each travel lane) will be five and one-half (5 ½') feet across. There will be a gap between lumps of one-foot (1') to accommodate the wheelbase of fire trucks and buses. The outside speed lumps will extend from the center lump to the lip of gutter. There will be a two-foot (2') horizontal taper originating at the crest of the speed lump and converging at the lip of curb. Asphalt concrete shall be mixed and placed in accordance with Section 22 of the City of Sacramento Standard Specifications. *(Refer to Page 11 for~~Page 10 is~~* a drawing of the proposed speed lump cross section for a typical residential street of 33 feet or less in width*)*.

Construction Specifications (Speed Tables)

Upon installation of speed tables, the asphalt concrete speed tables will have a width of 22 feet, made up of a 6' long vertical curvature of 72 feet reaching a minimum height of three and one-quarter inches and a maximum height of three and three-quarters inches (3 ¼" to 3 ¾") on each end of a 10' long flat surface (refer to Page 12). There will be a two-foot (2') horizontal taper originating at the crest of the speed table and converging at the lip of curb. Asphalt concrete shall be mixed and placed in accordance with Section 22 of the City of Sacramento Standard Specifications. (Refer to Page 12 for the proposed speed hump cross section).

Location Selection Guidelines

In selecting precise locations for the speed hump installation, the following guidelines shall be adhered to:

- Speed humps shall not be located over manholes, water valves, or street monumentation, or whenever possible, within twenty-five feet of fire hydrants, as they prevent/impede access to these facilities.
- Speed humps should be located five to ten feet away from driveways, whenever possible, to minimize their effect on driveway access.
- Speed humps should be located on or near property lines, whenever possible, to minimize the impact on (access to) individual properties.
- Speed humps should be located near streetlights, whenever possible, in order to enhance their visibility at night.

- Speed humps should be located a minimum distance of 200 feet from corners, whenever possible, and should never be located within a corner radius.

- ~~Where speed humps are constructed on streets having curves with greater than a 250-foot radius,~~ *N*~~n~~o speed humps shall be located on ~~the~~ *any* horizontal curve(s) *with less than a 650' radius*.

- Speed humps shall be spaced at a minimum interval of 250 feet and a maximum interval of 600 feet. Speed humps will be placed no closer than 200 feet from traffic control devices or four-way intersections.

- ~~No less than~~*Where possible, at least* two speed humps will be placed on a residential or parks and schools street *or qualifying contiguous segments*, as two humps are the minimum for effective speed control. When speed humps are to be installed at a Bypass location, one hump may be placed if the street segment or one of the streets in a series of street segments is less than 600 feet in length. The maximum number of speed humps is dictated by street length and spacing requirements.

- To deter driver from driving around speed humps where no vertical curb exists, a two-inch (2") pipe shall be set in the sidewalk, centered on the speed hump in each approach direction. The pipes shall be placed at a maximum of six inches (6") ~~form~~ *from* the back of curb *and shall allow a minimum of 48" of clear sidewalk width to allow for wheelchair access.* (~~refer~~ *Refer* to ~~Figure 3~~*Pages 10 - 12*).

Signs and markings

All signs and markings required with the speed humps shall be part of the contract bid package, unless these items are to be installed by City crews.

There are two types of advanced warning devices used to alert motorists of upcoming speed humps: street signs and pavement markings. The signing includes a 30-inch sign stating "SPEED HUMP~~S AHEAD~~" in four-inch (4") ~~series "C"~~ letters *and a second line with an advisory speed of 15 MPH.*~~,~~ ~~above~~ *Above* ~~which~~ *this text* is a pictorial of a speed hump. ~~A second sign recommending a speed of 15 mph is placed directly below the warning sign~~ (~~refer~~ *Refer* to ~~Figure 2~~*Pages 10 and 11*). *Signage for a speed table includes a 30-inch sign stating "SPEED TABLE" in four-inch (4") letters and a second line with an advisory speed of 20 MPH. Above this text is a pictorial of a speed table. (Refer to Page 12).*

Pavement markings for speed humps *and speed tables* shall include twelve-inch (12") wide *stripes, forming a* ~~longitudinal ladder markings at four feet (4') on center~~*chevron, extending six feet (6') from the approach edge of the speed hump to the apex of the speed hump and centered in each travel lane*~~, which are stenciled across each speed hump~~. *Sixty feet (60') of centerline shall be striped across the hump, extending thirty feet (30") from the apex of the speed hump in both directions. Speed tables shall be striped with seventy feet (70') of*

centerline, extending thirty-five feet (35') from the apex of the speed table in both directions. Pavement markings for speed lumps shall include diamond striping on the center lump(s) and ~~arrow~~ *chevron* markings on the side lumps. A reflective pavement marker will indicate the middle of the center lump(s) to assist RT and fire truck drivers to center their vehicle over the lump. *(Refer to Pages 10 -12).*

~~Relocation of Speed Humps or~~ Additional Speed Humps

~~Changing the location or a~~*A*dding additional speed humps on a street may be considered when all of the criteria listed below are met.

1. For Residential and Parks and Schools Locations: Speed humps are ineffective in reducing speeds of vehicles based on speed survey conducted for *24*-hour period. The ~~average~~ *85th percentile* speed~~s must each be less than two mph lower than those speeds demonstrated prior to the installation of speed humps in order to be considered ineffective.~~*must be 5 mph or greater than the posted or prima facie speed on the street segment.*

   For Bypass Locations: Speed humps are ineffective in reducing the volume of vehicles, based on an average daily traffic (ADT) count. Traffic volumes must be reduced by less than 10% from the street's ADT count prior to the installation of speed humps in order to be considered ineffective.

2. *Existing speed humps must be at least five hundred feet (500') apart.*

3. *There is a petition with ten signatures requesting additional humps. One resident signature per household having driveway access onto the street in question is allowed; a resident may be either an owner or tenant.*

4. *If all criteria are met, the segment will be ranked on the speed hump list. The segment will be balloted prior to installation. A minimum of 25% of ballots mailed shall be returned and a two-thirds majority of residents that vote are in favor of the installation of speed humps. ***

Relocation of Speed Humps

Changing the location of speed humps on a street may be considered when all of the criteria listed below are met.

~~2.~~*1.* Speed humps were placed in a location conflicting with the adopted guidelines, and another location exists which does not conflict with the adopted guidelines.

~~3~~2. There is a petition with a two-thirds majority of the street's residents in favor of the speed
humps relocation. ~~.~~ One resident signature per household having driveway access onto

the street in question is allowed; a resident may be either an owner or tenant.

3. A community meeting should be held, with the support of the district's City Council member, to discuss the advantages of speed humps. If the decision is made to relocate existing speed humps, a Council report and resolution must be drafted. When approved by the City Council, the relocation procedures may be initiated. Relocation of speed humps which may have been installed for less than two years will only be considered if the City is compensated by those requesting speed hump relocation for the full cost of relocating the speed humps, including design, construction, inspection, and administration.

Removal of Speed Humps

Removing speed humps from a street may be considered when all of the criteria listed below are met:

1. For Residential and Parks and Schools Locations: Speed humps are ineffective in reducing speeds of vehicles based on speed survey conducted for a 24-hour period. The 85th percentile and average speeds must each be less than 2 mph lower than those speeds demonstrated prior to the installation of speed humps in order to be considered effective.

   For Bypass Locations: Speed humps are ineffective in reducing the volume of vehicles, based on an average daily traffic (ADT) count. Traffic volumes must be reduced by less than 10% from the street's ADT count prior to the installation of speed humps in order to be considered ineffective.

2. Speed humps were placed in a location conflicting with the adopted guidelines, and no other location exists which does not conflict with the adopted guidelines.

3. There is a petition with a two-thirds majority of street's residents' signatures in favor of the speed hump removal. One resident signature per household having driveway access onto the street in question is allowed; a resident may be either an owner or tenant.

4. A community meeting should be held, with the support of the district's City Council Member, to discuss the advantages of speed humps. If the decision is made to remove existing speed humps, a Council report and resolution must be drafted. When

approved by the City Council, the removal procedures may be initiated. Removal of speed humps which have been installed for less than two years will only be considered if the City is compensated by those requesting speed humps removal for the full cost of the original installation, including design, construction, inspection, and administration. This would not apply if a street became a Regional Transit bus route.

Other Funding

A street *segment* which qualifies for any one of the speed hump categories may be funded by an individual or a group of individuals. The individual or group of individuals must enter into a memorandum of understanding (MOU) with the City of Sacramento, wherein they agree to pay for all costs associated with the installation of speed humps on their street (construction, inspection, administration, etc). Once a MOU is executed, the location to receive speed humps shall be included in the next City CIP speed hump project. Private payment for speed humps does not relieve a location from the requirement of a two-thirds majority of residents favoring the installation of speed humps, or from any other criterion set forth in these guidelines.

Regional Transit

Regional Transit (RT) adopted a policy on bus routing with regard to speed humps in 1982. This policy authorizes RT staff to modify bus routes so they do not utilize streets with existing or future speed humps, and to coordinate future placement of such devices. The Department of ~~Public Works'~~ *Transportation* policy is to provide RT with the locations of future speed humps so that problems, which this might create, can be avoided. Speed humps will not be placed on streets where RT bus service exists. However, RT has approved speed lumps for placement on bus routes.

Fire Department Emergency Response Routes

The City of Sacramento Fire Department has expressed concerns regarding speed humps, and desires that they not be placed on streets, which they identify as emergency response routes. The Department of ~~Public Works'~~ *Transportation's* policy is to provide the Fire Department with the locations of future speed humps so that they can identify emergency response routes. Speed humps will not be placed on streets, which the Fire Department identifies as emergency response routes. However, the Fire Department has approved speed lumps for emergency response routes on a case-by-case basis.

At the request of the Fire Department Public Information Officer, the Department of Transportation will consider including the conversion of existing speed humps to speed lumps in the annual Speed Hump Project installation. Residents will be notified prior to the conversion.

Public Notification

Public notifications, which are used for balloting and to inform residents of purposed speed humps and to have them vote, may be distributed by ~~one of two~~*the following* method~~s~~:

~~1.Ballots may be hand delivered by city staff, an area youth group or a temporary service.~~

~~2.~~*1.* Ballots may be mailed out to residents of affected streets.

Note: Ballots with a response requested should be sent far enough in advance to reach the public two and one half (2 ½) weeks prior to the response deadlines.

Street Participation in the Neighborhood Traffic Management Program (NTMP)

The NTMP reviews all streets within a neighborhood for possible traffic calming measures. In doing so, streets are evaluated for speed humps. If the traffic calming plan approved by resident and ~~city~~ *City* ~~council~~ *Council* votes does not include speed humps on a street, that street is ineligible to be considered for further traffic calming measures such as speed humps for a minimum of one-year after the NTMP project has been closed.

Revised June 1 2007

Proposed TPG Speed Hump Section Changes

INTRODUCTION:

The City of Sacramento began constructing undulations in 1980 in response to neighborhood speeding issues. In the mid-1990's, the program was modified and became known as the Speed Hump Program. The first speed humps were installed in 1996.

Speed humps are designed to enhance public safety by reducing vehicular speeds and cut-through traffic on local residential and minor collector streets. Speed humps are used on residential streets that qualify for the Program and where other methods of slowing traffic have not been effective.

Speed humps are 12 feet wide and between 3 ¼ and 3 ¾ inches high, slightly raised "mounds" in the pavement, which extend across the roadway. Speed humps have evolved from extensive research and testing. They have been found to be effective at reducing speeds and discouraging cut-through (i.e., non-local) traffic. ~~They have been installed on streets in Sacramento since 1996.~~ Speed humps are not installed on emergency response or bus routes.

As an alternative to speed humps, speed lumps have been approved by the Fire Department for use on most emergency response routes and by Sacramento Regional Transit for use on bus routes. Speed lumps are asphalt mounds, parabolic in shape, covering 12 feet of street with a height between 3 ¼ and 3 ¾ inches. The center mound or lump, has a width of 5 ½ feet to accommodate the wheelbase of fire trucks and buses. *On wider streets, a lump is placed in each travel lane.* The lumps adjacent to the center lump*(s)* vary in width to accommodate the street width.

In addition, the City has also implemented speed tables, which are similar to humps but incorporate a 10-foot flat surface in the middle and cover a total of 22 feet of street, with a height between 3 ¼ and 3 ¾ inches. Speed tables have been installed on streets in Sacramento as part of the Neighborhood Traffic Management Program (NTMP). *With the 2008 Transportation Programming Guide, they are being added to the Speed Hump Program for use on minor collector roadways with park or school frontage and posted speeds of 35 mph.* Speed tables have been approved by the Fire Department for use on emergency response routes and by Sacramento Regional Transit for use on bus routes *on a case by case basis.*

For simplicity in this document, the term "speed hump" will refer not only to the traditional speed hump, but also the modified hump designs described above as a speed lump or speed table.

The City of Sacramento has three types of speed hump categories: Residential, Parks and Schools, and Bypass. A list of streets that have qualified for speed humps within these categories is produced each year for the Transportation Programming Guide (TPG). This list ranks streets by Council District citywide as described in subsequent sections. The definition of each category is as follows:

- Residential – focused on reducing vehicular speed on residential streets,

- Parks and Schools – focused on reducing vehicular speed on streets which include park and/or school frontage, and
- Bypass – focused on reducing cut-through traffic volumes on residential streets.

Note: Speed humps are not always the best solution for residential street traffic problems. Under a separate program called the Neighborhood Traffic Management Program (NTMP), the Department of Transportation staff meets with neighborhood residents to develop and implement a community-based traffic calming plan for the entire neighborhood. Implemented in 1996, the NTMP considers traffic calming measures including speed humps, traffic circles, pedestrian islands, diverters, textured crosswalks, and chokers. For more information of the NTMP, please visit the Department of Transportation website at www.cityofsacramento.org/transportation or call 916-808-8300. The Program is initiated by public request and submittal of a Community Action Request form, which requires signatures from ten residents. The Program is offered on a first come-first served basis.

GOAL AND POLICY:

The Speed Hump Program is consistent with the following goal and policy of the City of Sacramento General Plan (adopted January 19, 1988, reflects City Council Amendments through 2000):

Goal:

Create and maintain a street system, which protects residential neighborhoods from unnecessary levels of traffic and/or excessive speeds.

Policy:

Continue wherever possible to design streets and approve development applications in such a manner as to eliminate high traffic flows, excessive speeds, and/or parking problems within residential neighborhoods.

More detail regarding Speed Hump Program Guidelines, adopted by City Council and last amended in January 2004, is available on the Department of Transportation website at www.cityofsacramento.org/transportation.

PROJECT INITIATION

In order for a street to be studied for speed humps, a petition signed by residents from ten households on the affected street segment must first be submitted. Petitions are available from the Traffic Engineering Section at 916-808-8300. A street segment qualifies for the installation of speed humps when the results of a traffic investigation demonstrate that the criteria, which are presented in this document, are met.

PROJECT LIST DEVELOPMENT

Eligibility Criteria

A street qualifies for the installation of Residential, Parks and Schools, or Bypass speed humps when the following minimum criteria are met.

Residential

- The segment is a minimum of 750 feet in length between traffic controls, four-way intersections, and/or curves with less than a 250-foot radius.
- *The street is comprised of contiguous segments with no stop controls and all side streets entering the segments are stopped. The total length of the contiguous segments must be at least 750' in length.*
- The speed limit is 30 mph or less.
- Street frontage is at least 75% residential.
- The street is not part of the Regional Transit bus network.[1]
- The street is not identified as an emergency response route by the Fire Department.[1]
- The 85th percentile speed must be a minimum of 5 mph over the speed limit.
- Two-thirds majority of residents that vote are in favor of the installation of speed humps.[2] A minimum 25% return rate is required.
- *On streets segments with curves, speed humps will only be placed in curves with a radius greater than 650'.*
- *Street segments requesting additional speed humps must meet the above criteria and the existing speed humps must be at least 500 feet apart.*

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1 Speed humps will not be approved on Regional Transit bus routes and emergency response routes, although speed lumps and/or speed tables may be approved on these streets by RT and the Fire Department.

2 One vote per household is allowed; voter(s) must reside at the household (whether they are owners or tenants), as they are the primary users of the street being considered for speed humps.

Parks and Schools

- The segment is a minimum of 500 feet in length between traffic controls, four-way intersections, and/or curves with less than a 250-foot radius.
- The speed limit is 30 mph or less *or 35 mph when considering the placement of tables.*
- Street frontage is adjacent to a school[3] or park.
- The street is not part of the Regional Transit bus network.[1]
- The street is not identified as an emergency response route by the Fire Department.[1]
- The 85th percentile speed must be a minimum of 5 mph over the speed limit.
- Two-thirds majority of residents that vote are in favor of the installation of speed humps.[4] A minimum 25% return rate is required.
- *On streets segments with curves, speed humps will only be placed in curves with a radius greater than 650'.*
- *Street segments requesting additional speed humps must meet the above criteria and the existing speed humps must be at least 500 feet apart.*

Bypass

- The segment is a minimum of 500 feet in length between traffic controls, four-way intersections, and/or curves with less than a 250-foot radius.
- The speed limit is 30 mph or less.
- Street frontage is at least 75% residential.
- The street is not part of the Regional Transit bus network.[1]
- The street is not identified as an emergency response route by the Fire Department.[1]
- Average daily traffic (ADT) is at least 500 vehicles.
- The street(s) serve to bypass[5] major streets with a four-way stop, a signalized intersection, or another street with speed humps.
- Two-thirds majority of residents that vote are in favor of the installation of speed humps.[2] A minimum 25% return rate is required.
- *On streets segments with curves, speed humps will only be placed in curves with a radius greater than 650'.*
- *Street segments requesting additional speed humps must meet the above criteria and the existing speed humps must be at least 500 feet apart.*

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3 Preschool, day care school, elementary, middle or high school.

4 One vote per household is allowed; voter(s) must reside at the household (whether they be owner or tenants,), as they are the primary users of the street being considered for speed humps. If the balloting of residents on the Parks and Schools streets does not demonstrate a two-thirds majority favoring the installation of speed humps, the City Council member representing the district in which the street is located may override the ballot results.

5 To be considered a "bypass" location, the ADT must be at least 50% higher than the volume that would be expected using the following trip generation rates: 10/trips/day/single family residential (SFR) unit, 6 trips/day/multi family residential (MFR) unit. Land uses that do not front the bypass location, itself, but which could reasonably be expected to use the bypass street(s) should be considered when determining the expected volume.

~~**Project Identification**~~

~~In order for a street to be studied for speed humps, a petition signed by residents from ten households on the affected street segment must first be submitted. Petitions are available from the Traffic Engineering Section at 916-808-8300. A street segment qualifies for the installation of speed humps when the results of a traffic investigation demonstrate that the criteria, which are presented in this document, are met.~~

PROJECT RANKING PROCESS

Streets which meet the minimum criteria, as specified previously, are scored and ranked using the following criteria:

Residential

1. **Volume** **(Max. Points: No Limit)**
   Points = Average Daily Traffic Volume / 50

2. **Frontage** **(Max. Points: No Limit)**
   Points = (# of residential units fronting the street) + (apartment frontage / 25 feet)

3. **Speed** **(Max. Points: No Limit)**
   Points = 5 points for every mile per hour that the 85th percentile speed of traffic exceeds the speed limit.

Parks and Schools

1. **Volume** **(Max. Points: No Limit)**
   Points = Average Daily Traffic Volume / 50

2. **Frontage** **(Max. Points: No Limit)**
   Points = (# of residential units fronting the street) + (lineal feet of apartment frontage /25 feet) + (lineal feet of school frontage / 25 feet) + (lineal feet of park frontage / 25 feet) + (lineal feet of playground frontage / 25 feet)

3. **Speed** **(Max. Points: No Limit)**
   Points = 5 points for every mile per hour that the 85th percentile speed of traffic exceeds the speed limit.

Bypass

1. **Volume** **(Max. Points: No Limit)**
   Points = Average Daily Traffic Volume / 50

2. **Frontage** **(Max. Points: No Limit)**
   Points = (# of residential units fronting the street) + (apartment frontage / 25 feet)

3. **Bypass Volume** **(Max. Points: No Limit)**
   Points = Daily Bypass Volume / 10

Attachment 4

Proposed Summary Changes to Traffic Signal Section

The following changes are recommended for the Traffic Signal Section.

1. Update methodology for evaluating proposed signal locations.

   The proposed methodology will require review of each candidate signal location for possible improvements, other than a traffic signal, that may be effective in addressing concerns at the subject location. If measures exist and are feasible, the improvements would be implemented and the location may be monitored for up to three years before consideration for inclusion into the TPG. If measures do not exist, the location would be scored and ranked and added to the TPG.

2. Update signal warrants to reflect revised California MUTCD.

   The 1996 Caltrans Traffic Manual was changed to the California Manual of Uniform Traffic Control Devices (MUTCD) in September of 2006. This revised the traffic signal warrants used to demonstrate the need for a traffic signal. The satisfaction of a traffic signal warrant does not in itself require the installation of a traffic signal.

3. Modify Project Ranking Process.

   The following criteria will be revised:

   - Collisions - Previously, the collisions were assigned a point value based on the number and type (fatal, injury, and property damage only) of collision. The new criteria will use a collision rate using weighted values for type of collision. A collision rate is better when comparing multiple locations.
   - Pedestrian – Shift in the criteria from the number of pedestrians to the level of difficulty to cross the street, and to the proximity to activity centers.
   - Traffic Volume – Change in volume range to match current street standards.
   - Speed – Use 85th percentile speed instead of posted speed.
   - Special Conditions – Activity Centers Criteria moved to Pedestrians' criteria.
   - Point allocation – A maximum of 100 points are now possible.

4. Review current TPG locations for improvements.

   Each location on the current TPG will be evaluated for possible improvements other than a traffic signal. They will also be analyzed using the updated traffic signal warrants.

5. Proposed Locations

New locations will be requested through Council, constituents, and City staff. Staff will also conduct a review of high incident locations for possible inclusion in the TPG.

Proposed Changes to Traffic Signal Section

INTRODUCTION

Traffic signals determine ~~who has~~ the right-of-way at an intersection or crossing. They facilitate orderly traffic flow, allow pedestrians to cross, and provide cross-street traffic a chance to cross or enter an intersection. When installed at appropriate locations, traffic signals can increase the capacity of an intersection, reduce the frequency of collisions, and provide better minor street access. Because traffic signals are expensive to install (approximately $400,000 per signal) and may induce safety problems if not appropriately placed, the City only installs signals where they will clearly improve safety and make the intersection operate more efficiently. The City typically constructs one or two traffic signals per year through the Capital Improvement Program.

GOALS AND POLICIES

The Traffic Signals Program is consistent with the following City of Sacramento General Plan (adopted January 19, 1988, reflects City Council Amendments through March 2004) goals and policies.

Goals:

1. Create a safe, efficient surface transportation network for the movement of people and goods.

   Policy:

   - Install traffic signals, when appropriate, to improve safety and increase the efficiency of intersections within the City.

2. Maintain a desirable quality of life, including good air quality, while supporting planned land use and population growth.

   Policy:

   - Install traffic signals, when appropriate, to improve air quality by reducing delay at intersections.

3. Work toward achieving an overall Level of Service C on the City's local and major street systems.

   Policy:

   - Install traffic signals to make more efficient use of the City's existing street system.

4. Increase the capacity of the transportation system.

Policy:

- Support programs that improve traffic flow.

PROJECT LIST DEVELOPMENT

The City evaluates approximately 10-15 new intersections each year for traffic signals. Locations are solicited through traffic investigations, resident requests, development projects, Councilmember requests, etc. The City also reviews the top ten high collision intersections on an annual basis for potential measures, including a traffic signal, which may mitigate for collisions.

Proposed Changes to Traffic Signal Section Eligibility and Scoring Criteria

Eligibility Criteria

The Traffic Signal Program List procedure involves three phases. Project eligibility is determined during Phases I and II, as presented below:

Phase I - *Investigation Review*

In Phase I, the following data is collected for locations which have been suggested as candidates for a traffic signal:

Collisions:	~~A listing of the most recent three calendar years of reported collision history is compiled. Collisions types that are correctable with a signal are notated.~~*A recent three-year compilation of reported collision history differentiating collision types and correctability is developed.*
Traffic Volumes:	Twenty-four hour volume counts with an hourly listing of each approach direction are obtained for the combined minor street volumes, the combined major street approach volumes, and a total for the entire intersection. ~~Peak hour (am and pm) traffic volumes by manual count for the turning and through movements are typically obtained.~~
Facilities/Activity Centers:	*Information about nearby facilities and activity centers that serve the young, elderly, and/or persons with disabilities, including requests from persons with disabilities for accessible crossing improvements is collected at the location under study. These persons might not be adequately reflected in the pedestrian volume if the absence of a signal restrains their mobility.*
Pedestrian/Bicycle:	~~As part of the peak hour vehicular movement counts, pedestrian and bicycle data are collected. If the pedestrian and bicycle peak hour differs from the vehicular peak hour, a separate manual count is conducted~~. *Pedestrian and bicycle counts may be collected if a high number of pedestrians are anticipated to cross the intersection. Also, the width of the major street crossing is recorded.*
Existing Controls:	The current type of control (i.e., two-way stop, an all-way stop, etc.) is recorded.
Speed:	*The 85th percentile speed is collected for the major and minor streets.*

~~The above data is collected to screen eligible projects. In addition, information on topographic/geometric features, land use, and visibility is also collected and considered when making recommendations on eligible traffic signal locations.~~

The above data is collected and reviewed to determine whether measures exist, other than a traffic signal, which would mitigate for the concern. If measures are feasible, they are to be implemented and the location monitored for up to three years. The location is placed on the City's Traffic Signal Monitoring List. After the monitoring period, an evaluation of the effectiveness of the measures is conducted. If measures are found to be effective, the location is removed from the Traffic Signal Monitoring List and is no longer considered for the Traffic Signal Program unless conditions change. If measures are not effective, the location is to be evaluated for signal warrants as outlined in Phase II below. The City Traffic Engineer has the discretion to move forward with Phase II prior to the three year period as conditions warrant.

Phase II– *Signal Warrant Review*

~~In Phase II, the information from Phase I is used to determine which locations meet one or more of the following eleven Caltrans traffic signal warrants:~~

If no feasible measures exists, or the City Traffic Engineer advances the project, the location is evaluated in Phase II. In Phase II, the information from Phase I and updated data is used to determine which locations meet one or more of the following eight Caltrans traffic signal warrants:

Warrant-1 ~~Minimum Vehicle Volume~~ *Eight-Hour Vehicular Volume*	~~This warrant is satisfied when the volume of intersecting traffic (from the minor street as compared to the total traffic) is the principal reason for consideration of a traffic signal. For most urban locations, a minimum of 600 vehicles per hour for the heaviest eight hours must approach the intersection from the major street, and for the same 8-hour period a minimum of 200 vehicles per hour must approach the intersection from the minor street.~~ *The Eight Hour Vehicular Volume signal warrant is intended for application where (A) a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal or (B) where the traffic volume on a major street is so heavy that the traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing a major street.*
Warrant-2 ~~Interruption of Continuous Traffic~~ *Four-Hour Vehicular Volume*	~~This warrant is satisfied when the traffic volume on the major street impacts the minor street by creating a hazard for traffic entering the major street. For most urban locations, a minimum of 900 vehicles per hour for the heaviest eight hours must approach the intersection from the major street, and for the same eight-hour period a minimum of 100 vehicles per hour must approach the intersection from the minor street.~~ *The Four Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal.*

Warrant-3 ~~Minimum Pedestrian Volume~~*Peak Hour*	~~This warrant is satisfied when there is a minimum of 100 pedestrians per hour for four hours or a minimum of 190 pedestrians in one hour crossing the major street at regular or mid-block locations. Acceptable gaps in traffic and the distance to nearby signals are factors that are also considered in determining whether or not a signal is appropriate~~ *The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor street traffic suffers undue delay when entering or crossing the major street..*
Warrant-4 ~~School Areas~~*Pedestrian Volume*	~~This warrant is satisfied when there is a minimum of 100 pedestrians per hour for two hours and a minimum of 500 vehicles per hour for the same two hours in the vicinity of a school. It may also be appropriate where it is necessary to extend or create adequate crossing gaps in the flow of traffic on roadways in suggested school route areas.~~ *The Pedestrian Volume signal warrant is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street.*
Warrant-5 ~~Progressive Movement~~*School Crossing*	~~This warrant is satisfied when the distance to the nearest signalized intersection is greater than 1,000 feet, and progressive movement control requires the installation of a traffic signal where one would not otherwise be warranted. The signal will provide proper vehicle platooning and speed control. Factors considered include whether or not the streets are one-way or two-way, the operation of adjacent signals, and travel speeds.~~ *The School Crossing signal warrant is intended for application where the fact that school children cross the major street is the principal reason to consider installing a traffic signal.*
Warrant-6 ~~Collision~~ *Crash* Experience	~~This warrant is satisfied when five or more collisions in a year, correctable by traffic signal control, are reported, and other less restrictive remedies have failed to reduce the number of collisions; where the traffic volumes of warrants one and two are 80% fulfilled; and where such a signal would not seriously disrupt progressive traffic flow.~~ *The Crash Experience Signal warrant conditions are intended for application where the severity and frequency of crashers are the principal reasons to consider installing a traffic control signal.* .

Warrant-7 ~~Systems Warrant~~ *Coordinated Signal System*	~~A traffic signal installation may be warranted to encourage concentration and organization of traffic flow networks where there are two major routes meeting specific volume and functional characteristics. This warrant is satisfied when there is a minimum of 1000 vehicles during any one hour of the day and both streets meet a requirement of being a major route through the City.~~*The Coordinated Signal System warrant is intended to provide traffic control signals at intersections where they would not otherwise be needed in order to maintain proper platooning of vehicles, thus providing progressive movement through the corridor*
Warrant-8 ~~Combination of Warrants~~*Roadway Network*	~~This warrant is satisfied when warrants one and two are satisfied to the extent of 80% or more of the stated numerical values.~~ *The Roadway Network warrant conditions are intended to provide a traffic control signal to encourage concentration and organization of traffic flow on a roadway network.*
~~Warrant-9~~ ~~Four Hour Warrant~~	~~This warrant is satisfied for most urban areas when for four or more hours, the minor street approach volumes exceed 200 vehicles per hour and the major street approach volume exceeds 800 vehicles per hour during the same four hours.~~
~~Warrant-10~~ ~~Peak Hour Delay~~	~~This warrant is satisfied when the minor street approach volume is at least 150 vehicles and the total volume of intersection approaches are 800 vehicles per hour. The number of lanes and the type of geometric configuration (4-legged or "T" intersection) is also considered in determining whether or not minor street traffic suffers delay during the peak hour.~~
~~Warrant-11~~ ~~Peak Hour Volume~~	~~This warrant is satisfied for most urban areas when the minor street approach volume exceeds 200 vehicles in an hour and the major street approach volume exceeds 1,250 vehicles for the same hour. It is somewhat similar to warrant nine (four hour volumes), and recognizes minor streets that suffer delay in entering or crossing major streets.~~

If the location meets traffic signal warrants, the location is evaluated to determine the preliminary feasibility of a traffic signal at this location. Some examples of infeasibility include impacts to hollow sidewalks, requires major roadway widening, insufficient right of way, etc. A roundabout evaluation is conducted concurrently to determine whether a roundabout can be installed at the location in lieu of a traffic signal. If found to be infeasible, the location is no longer considered in the Traffic Signal Program.

It should be noted that the satisfaction of a traffic signal warrant does not in itself require the installation of a traffic signal. Candidate locations will be reevaluated for signal warrants every three years, or when conditions warrant, and may be removed from the Traffic Signal Program list if the location no longer meet warrants.

PROJECT RANKING PROCESS

Phase III

Once a location is determined to be feasible, the following criteria are applied to rank the eligible locations. The maximum possible score is 100 points.

1. Collisions ..... (Max Points: ~~No limit~~*55*)

~~Points are assigned for each reported collision that occurred at the intersection during the previous three years that was susceptible to correction by signalization, as follows:~~

~~Type of Collision~~	~~Points Per Occurrence~~
~~Fatal~~	~~48~~
~~Injury~~	~~24~~
~~Property Damage Only~~	~~12~~

~~The total points for the previous three years are divided by three to determine a yearly average that is then assigned to the proposed signal location.~~ *The collision rate of the intersection is compared to the single highest collision rate of all the intersections being evaluated. The collision rate per million vehicle miles is calculated using the following equation:*

$$\text{Collision Rate} = \frac{\text{Number of correctable collisions in a 3 year period} \times 1{,}000{,}000}{3 \times 365 \times \text{total volume of entering vehicles per day}}$$

Collisions used to calculate the collision rate are those that occurred within 100 feet of the intersection which are susceptible to correction by signalization. Correctable collision types are violations for traffic signals and signs, vehicle, pedestrian and bicycle right of way violations, etc.

The collision rate also factors in the severity of the collision by using an Equivalent Property Damage Only (EPDO) weighting. It attaches greater importance, or weight, to collisions resulting in an injury or fatality, and less importance to property damage only collisions. The weighting of collision types are as follows:

Type of Collision	*Equivalent Weight*
Fatal	*9.5*
Injury	*3.5*
Property Damage Only	*1*

Collision points are assigned as follows:

3 Yr Average Correctable Collision Rate of Project X 55
=
Single Highest 3 Yr Average Correctable Collision Rate of Projects Considered

2. Pedestrians~~/Bicycles~~ ..... (Max. Points: *12~~30~~*)

~~A maximum of ten pedestrian points are assigned for each of the following:~~

~~*(A) Pedestrians (General)* *(Max. Points: 10)*~~

~~Points are assigned based on the number of pedestrians crossing the higher volume street during the four highest traffic hours, as presented below:~~

~~Pedestrians~~	~~Points~~	~~Pedestrians~~	~~Points~~
~~≥ 100~~	~~10~~	~~40-49~~	~~4~~
~~90-99~~	~~9~~	~~30-39~~	~~3~~
~~80-89~~	~~8~~	~~20-29~~	~~2~~
~~70-79~~	~~7~~	~~10-19~~	~~1~~
~~60-69~~	~~6~~	~~0-9~~	~~0~~
~~50-59~~	~~5~~		

~~*(B) Pedestrians (Schools)* *(Max. Points: 10)*~~

~~If the school warrant (Caltrans School Warrant #4) is met, 10 points are assigned.~~

~~*(C) Bicycles* *(Max. Points: 10)*~~

~~If the location is identified in the City/County Bikeway Master Plan, 10 points are assigned~~

(A) Pedestrian Crossing *(Points: 10)*

Points are assigned based on the average daily traffic (ADT) volumes of the major street and the crossing distance of the major street, as presented below:

MAJOR STREET WIDTH (FEET)

MAJOR STREET ADT	*<40*	*41-50*	*51-60*	*61-70*	*71-80*	*>81*
<4,000	*0*	*1*	*2*	*3*	*4*	*5*
4,001-7,000	*1*	*2*	*3*	*4*	*5*	*6*
7,001-14,000	*2*	*3*	*4*	*5*	*6*	*7*
14,001-21,000	*3*	*4*	*5*	*6*	*7*	*8*
21,001-27,000	*4*	*5*	*6*	*7*	*8*	*9*
>27,001	*5*	*6*	*7*	*8*	*9*	*10*

(B) Activity Centers *(Points: 2)*

One point is assigned for each of the following activity centers which generate pedestrian traffic. The activity center must be located within 300 feet of the candidate traffic signal location. The maximum number of points is two points. Examples include:

- *Schools*
- *Parks*
- *Libraries*
- *Employment Centers*
- *Stadiums*
- *Arenas*
- *Senior Centers*
- *Commercial Centers*
- *Light Rail Lines*
- *Hospitals*
- *High Density Residential*

3. Bicycle Master Plan ***(Max. Points: 5)***

5 points are given if a street is identified in the City/County Bikeway Master Plan.

34. Average Daily Traffic (ADT) Volumes ..... (Max. Points: 10)

Points are assigned based on a comparison of the average daily traffic (ADT) volumes

on the intersecting streets, as presented below:

MINOR STREET ADT

MAIN STREET ADT	<~~2~~1,000	~~2~~1,001-~~5~~2,000	2~~5~~,001-~~10~~ 3,000	~~10~~3,001 - ~~15~~4,000	~~15~~4,001-~~20~~5,000	>~~20~~5,000
<~~4~~2,000	0	1	2	3	4	5
~~4~~2,001-7~~5~~,000	1	2	3	4	5	6
7~~5~~,001-14~~10~~,000	2	3	4	5	6	7
14~~10~~,001-21~~15~~,000	3	4	5	6	7	8
21~~15~~,001-27~~20~~,000	4	5	6	7	8	9
>27~~20~~,000	5	6	7	8	9	10

~~4~~5. Peak Hour Traffic Volumes ..... (Max. Points: 10)

Points are assigned based on a comparison of side street traffic volume to main street traffic volume during the peak hour, as presented below:

MINOR STREET PEAK HOUR VOLUME

MAJOR STREET PEAK HOUR VOLUME	<100	101-200	201-300	301-400	>400
<400	0	0	1	2	3
400-600	0	1	2	3	4
601-800	1	2	3	4	5
801-1,000	2	3	4	5	6
1,001-1,200	3	4	5	6	7
1,201-1,400	4	5	6	7	8
1,401-1,600	5	6	7	8	9
>1,601	6	7	8	9	10

~~5~~6. Speed ..... (Max. Points: 5)

Points are assigned in this category to account for the difficulty that motorists,

bicyclists, and pedestrians may have judging gaps in traffic on high-speed streets. More points are assigned for the higher-speed streets, as presented below:

85th Percentile Posted Speed (mph)	Points
50+	5
40-49	4
35-39	3
30-34	2
25-29	1
<25	0

Zero points are assigned if the intersection has an all way stop.

~~6~~7. Special Conditions ..... (Max. Points: 3~~5~~)

~~Points are added based on special conditions related to the benefits or drawbacks of signalizing an intersection as determined by the City Traffic Engineer. Although the sum of the three categories below may total more than five points for a candidate location, no more than five points are assigned.~~

~~(A) Activity Centers (Max. Points: 3)~~

~~One point is assigned for each of the following activity centers that generate pedestrian or emergency vehicle traffic and are within 1,000 feet of the candidate traffic signal location:~~

- ~~School~~
- ~~Park~~
- ~~Library~~
- ~~Employment~~
- ~~Stadium~~
- ~~Arena~~
- ~~Senior Center~~
- ~~Commercial Center~~
- ~~Fire Station~~
- ~~Rail Line~~
- ~~Hospital~~
- ~~High Density Residential~~

~~(B) Rail Crossing (Max. Points: 2)~~

~~Up to two points may be assigned if a rail crossing that would benefit from adjacent traffic signal pre-empt operation is within 1,000 feet.~~

~~(C) Other Safety Concerns (Max. Points: 2)~~

~~Two points are assigned when restricted sight distance is a concern, or there is a favorable condition for signal coordination.~~

Points are assigned based on special or unique conditions related to the benefits or drawbacks of signalizing a particular intersection. Some considerations include distance to a heavy rail crossing, proximity to fire stations, beneficial coordination with adjacent signals, restricted sight distance, etc. The number of points is determined by the City Traffic Engineer.

Attachment 5

Proposed Pedestrian Improvements Section Criteria

The following criteria are being proposed to score and rank pedestrian improvement projects.

Overview:

Safety oriented criteria

Points	*Description*
15	Barrier Elimination
15	Infrastructure Completeness (new)
10	Car/Pedestrian Collisions
10	Speed
10	Volume

Project setting criteria

	Points	*Description*
	5	Transit Access
	5	Economic Development
	5	Infill Development
	5	Adjoining Property (new)
	10	Land Use (new)
	10	Activity Centers
Total	100	

Barrier Elimination ..... (Max Points: 15) (combinable)

Project's ability to remove obstacles for safe travel or to introduce a shorter travel distance.

15 points – fills an unpaved gap between two existing sidewalks on a thru street
10 points – creates a new pedestrian way replacing an out of direction path greater than ¼ mile.
10 points – removes physical barriers (fixed objects with <36" clear path)
10 points – increases an existing sidewalk width to 4 foot minimum clear path.
10 points – fixes all non-compliant features (ramps, driveways, slopes)
5 points – fixes one or more non-compliant ramps or driveways, but not all.
5 points – introduces new street crossing improvements
5 points – introduces a new pedestrian way that connects a dead end street to other streets.

Infrastructure Completeness ..... (Max Points: 15)
(combinable)

Project's ability to improve existing conditions to bring into compliance with the assigned category of Basic, Upgrade or Premium.

All Projects:
10 points – no sidewalk
5 points – existing sidewalk width less than 4 feet.
5 points – no street lights
5 points – no curb and gutter
5 points – unmarked crosswalk
Additional points generally for Upgrade and Premium Projects:
5 points – existing sidewalk width less than 6 feet.
7 points – no planting strip
3 points – no trees in planting strip
5 points – low level lighting (infrequent spacing)
5 points – no pedestrian island, bulb-out, or raised crosswalk
5 points – no traffic signal enhancements at signals (countdown, detection)
Additional points for Premium Projects only:
5 points – existing sidewalk width less than 8 feet.
3 points – no street furniture (benches, way-finding signage, trash containers)
2 points – no public art, places for public events and gatherings

Car/Pedestrian Collision ..... (Max Points: 10)
(combinable)

Reported collision between car and pedestrian that occurred during the previous three years.

0 points – one or zero collisions
5 points – two collisions
2 points – per each successive collision

Speed ..... (Max Points: 10)

Posted speed limit at the project location. Intersection projects shall use the highest posted speed limit of the streets.

10 points – streets with posted speed of 45 mph or higher
8 points – streets with posted speed of 40 mph
6 points – streets with posted speed of 35 mph
4 points – streets with posted speed of 30 mph
2 points – streets where vehicles are allowed
0 points – streets where no motorized vehicles are allowed.

Volume ..... (Max Points: 10)

Average Daily Traffic (ADT) at the project location.
10 points – ADT>20,000
8 points – ADT between 10,001 and 20,000
5 points – ADT between 4,001 and 10,000
0 points – ADT between 1 and 4,000

Transit Access..... (Max Points: 5)
(combinable)

Project enables direct access to transit.
5 points – Within ½ mile of a LRT or other commuter rail station platform
4 points – Connected to a designated Transit Bus Stop
3 points – Within 600 feet of a street with a Transit Bus Stop
0 points – No known transit at project location

Economic Development ..... (Max Points: 5)
(combinable)

Project falls within the Economic Development Strategy
Does the project fall within one of the nineteen (19) Neighborhood Commercial Revitalization Areas?
Is the project located within one of the twenty-seven (27) Key Development Opportunity Areas or Sites?
Is the project located in either the Merged Downtown or SP/Richards Redevelopment Area?
If Yes on any of the above (3 points) _____

Is the project located in a Business Improvement District (BID) or Property-Based Improvement District (PBID)?
_____Yes (3 points) _____No (0 points)

Infill Development ..... (Max Points: 5)
(combinable)

Project falls within the Infill Development Areas
Is the project in one of the Infill Areas as defined in the City of Sacramento Infill Strategy adopted on May 14, 2002?
This document defines infill in four categories:
Target Residential Area _____Yes (3 points) _____No (0 points)
Central City Area _____Yes (3 points) _____No (0 points)
Neighborhood Commercial Revitalization Area _____Yes (3 points)
_____No (0 points)
Transit Station Area _____Yes (3 points) _____No (0 points)

Adjoining Property (new) ..... (Max Points: 5)

Based on the orientation of the development at the back of sidewalk, or where the sidewalk would be in conditions where the sidewalk is not present.

5 points – building with entrance at public sidewalk
3 points – building, set back from sidewalk but connected with walkways
1 points – building, blank – no entry at public sidewalk
0 points – existing landscaping or open space

Land Use (new) ..... (Max Points: 10)

Points are assigned to a project based on the predominant adjacent General Plan land use designations.

10 points – high density residential, commercial, mixed use and office designations
5 points – medium and low density residential uses
1 points – industrial uses
0 points – passive open space and agricultural uses

Activity Centers ..... (Max Points: 10)
(combinable)

Points are assigned to activity centers when a project is within a 600 foot radius to the parcel boundary of the activity center.

10 points – Schools, Colleges and Universities with enrollment greater than 400 students
8 points – Schools, Colleges and Universities with enrollments less than 400 students
6 points – Libraries, Parks, Senior Citizen Facilities, Community Centers
4 points – Shopping areas, Employment centers
2 points – Extra points for K-8 Schools

Proposed Merging of the Sidewalks to Schools Section

1. Merging Sidewalks to Schools with Pedestrian Improvements

Previous versions of the Transportation Programming Guide included a section called Sidewalks to Schools. This section recognized the ongoing need to provide better ways for children to walk to school. It has been one of the resources used by the city to seek grant funding in the Safe Routes to School Grant Funding program.

Because the new Pedestrian Improvements Section will identify sidewalk projects, there is some duplication of effort, and potentially room for confusion. The proposal for the Sidewalks to Schools section, therefore, is to merge the two sections.

2. Comparison of criteria between Sidewalks to Schools and Pedestrian Improvements Sections

Both sections of the TPG will evaluate proposed projects using similar criteria. The table below compares the Sidewalks to Schools Section to the new Pedestrian Improvements Section:

Sidewalks to Schools	Pedestrian Improvements
10 pts. ADT (volume)	10 pts. Volume
25 pts. No. of Students	10 pts. Activity Centers (schools)
10 pts. Posted Speed	10 pts. Speed
35 pts. Existing Condition	15 pts Infrastructure Completeness
10 pts. Infill Development	5 pts. Infill Development
10 pts. Car-Ped. Collisions	10 pts. Car-Ped. Collisions
100 pts. Total	***60 pts. Subtotal***
	additional criteria:
	15 pts. Barrier Elimination
	5 pts. Transit Access
	5 pts. Economic Development
	5 pts. Adjoining Property
	10 pts. Land Use
	100 pts. Total

The most significant differences between the criteria of the two sections are the amount of points that are assigned in the number of students, and the existing conditions. Additionally the Pedestrian Improvements Program Section has other criteria that are not included in the Sidewalks to Schools Section. It is anticipated that most of these additional criteria will be supportive of needed sidewalks to schools projects.

3. Safe Routes to Schools Funding Programs:

Over the past 7 years the State of California Department of Transportation (CalTrans) has solicited local jurisdictions to submit projects for its Safe Routes to Schools program. These funds apply to all schools and are limited to $500,000. This State funded program has made it possible for the City to fund several school related projects, including the

Taylor Street School Pedestrian Improvements project and the Millcreek Drive at West El Camino Avenue Intersection Improvements project.

In the beginning of 2007, CalTrans also began administering a new Federal Safe Routes to Schools grant fund. This fund is similar to the State funded program in that it funds projects to benefit children walking or bicycling to school. The Federal program also has some differences, some of the most significant being that the Federal program applies to kindergarten through 8th grade only and that the maximum construction cost is $1 million.

With regards to the TPG, the most significant difference between the State and Federal funding programs is that the Federal programs will not fund high schools.

4. Indication of Safe Routes to School Applicability in the TPG

Within the new Pedestrian Improvements Section of the TPG, there will be a column in the table that will indicate which of the two Safe Routes to School Programs do apply to the listed project. Since Safe Routes to Schools Programs apply to traffic signals section, the streetscapes section and to the bicycle section, a similar treatment to those tables will also be made.

Attachment 6

Presentation

Transportation Programming Guide

City of Sacramento

Department of Transportation

Transportation Programming Guide

Summary of Proposed Changes

- Minor Change to Major Streets Improvements and Streetscape Enhancements
- Changes to Speed Hump Program Guidelines

Transportation Programming Guide

Summary of Proposed Changes Continued

- Changes to Traffic Signal Section project list development methodology, project eligibility and scoring and ranking criteria
- New Pedestrian Section
- Merge Sidewalks to School Section to new Pedestrian Section

Transportation Programming Guide

"Alternate Modes" Criteria Changes

- Change name of criteria from "Alternate Modes" to "Bicycle, Pedestrian and Transit" criteria.
- Major Street Improvements Section: add points towards if project adds a new sidewalk where there currently is none.
- Streetscape Enhancements Section: add points if there has been a collision involving a pedestrian.

Transportation Programming Guide

Economic Development Criteria Changes

- Economic Development Strategy approved by City Council on May 29, 2007
- Major Street Section and Streetscape Enhancements Section: Increase Points for Economic Development

Transportation Programming Guide

Speed Hump Section Changes

- Change Speed Hump Program Guidelines
  - ✓ Update the eligibility requirements to consider streets not currently addressed by the program.
  - ✓ Refine criteria and process to reflect "lessons learned".
  - ✓ Include speed tables in the program.

Transportation Programming Guide

Traffic Signal Section Summary

- Eligibility Methodology
- Update Signal Warrants (2006)
- Criteria and Point Allocation
- Reevaluate Current Traffic Signal List

Transportation Programming Guide

Traffic Signal Section Methodology

- Project list Development
  - ✓ New Requests
  - ✓ High Incident Locations
  - ✓ Review Current List

Transportation Programming Guide

Traffic Signal Section Methodology

- Phase I – Investigation Review:
  - ✓ Data Collection and Evaluation
  - ✓ Identify Possible Mitigation Measures (other than Traffic Signal)
  - ✓ Measures feasible – Monitor up to 3 years (monitoring list)
    - Remove from list if effective
    - Phase II if not effective
  - ✓ Measures not Feasible – Phase II

Transportation Programming Guide

Traffic Signal Section Methodology

- Phase II – Signal Warrant Review:
  - ✓ Caltrans Signal Warrants
  - ✓ Roundabout Evaluation
  - ✓ Preliminary Feasibility

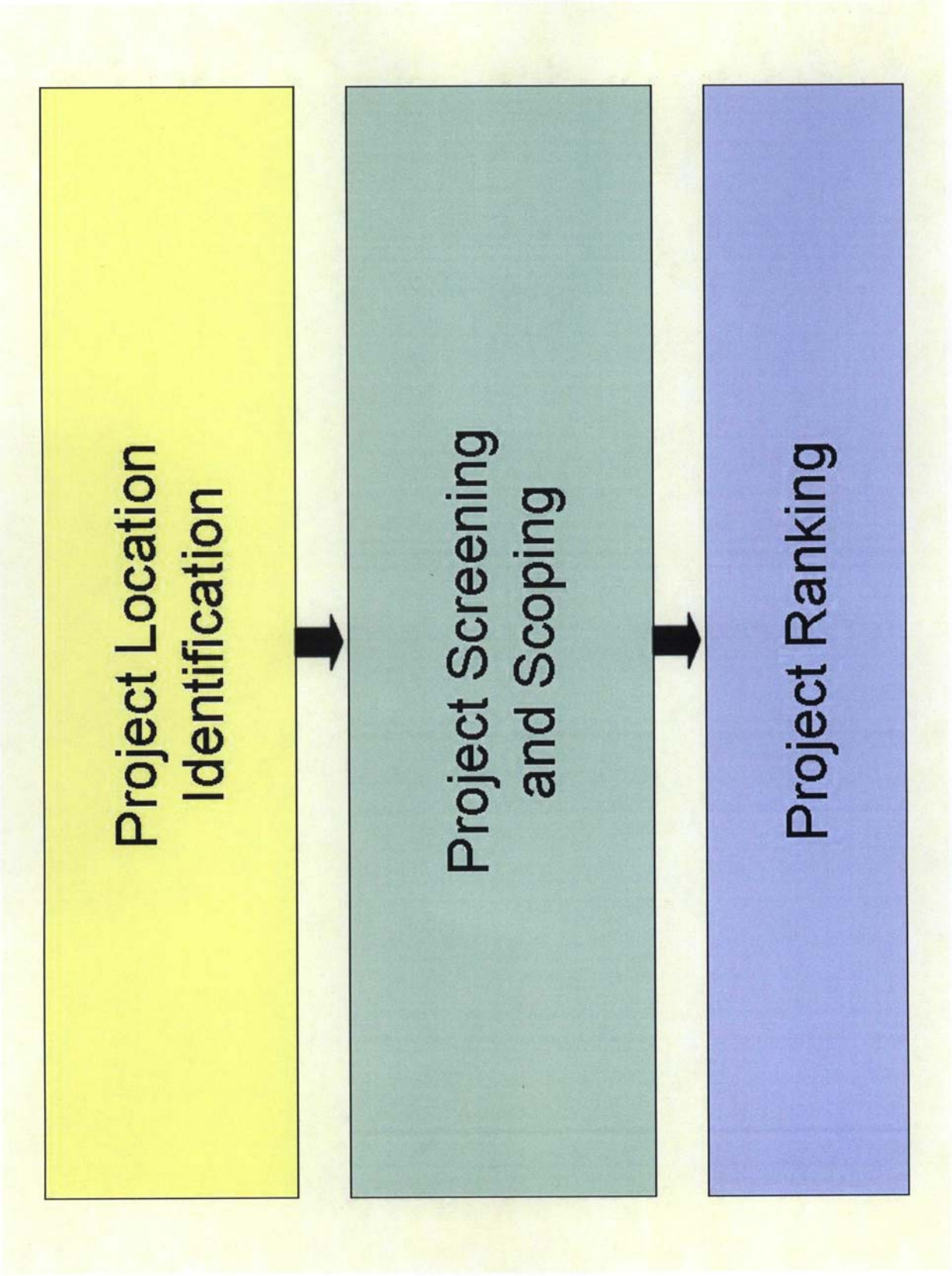
Transportation Programming Guide

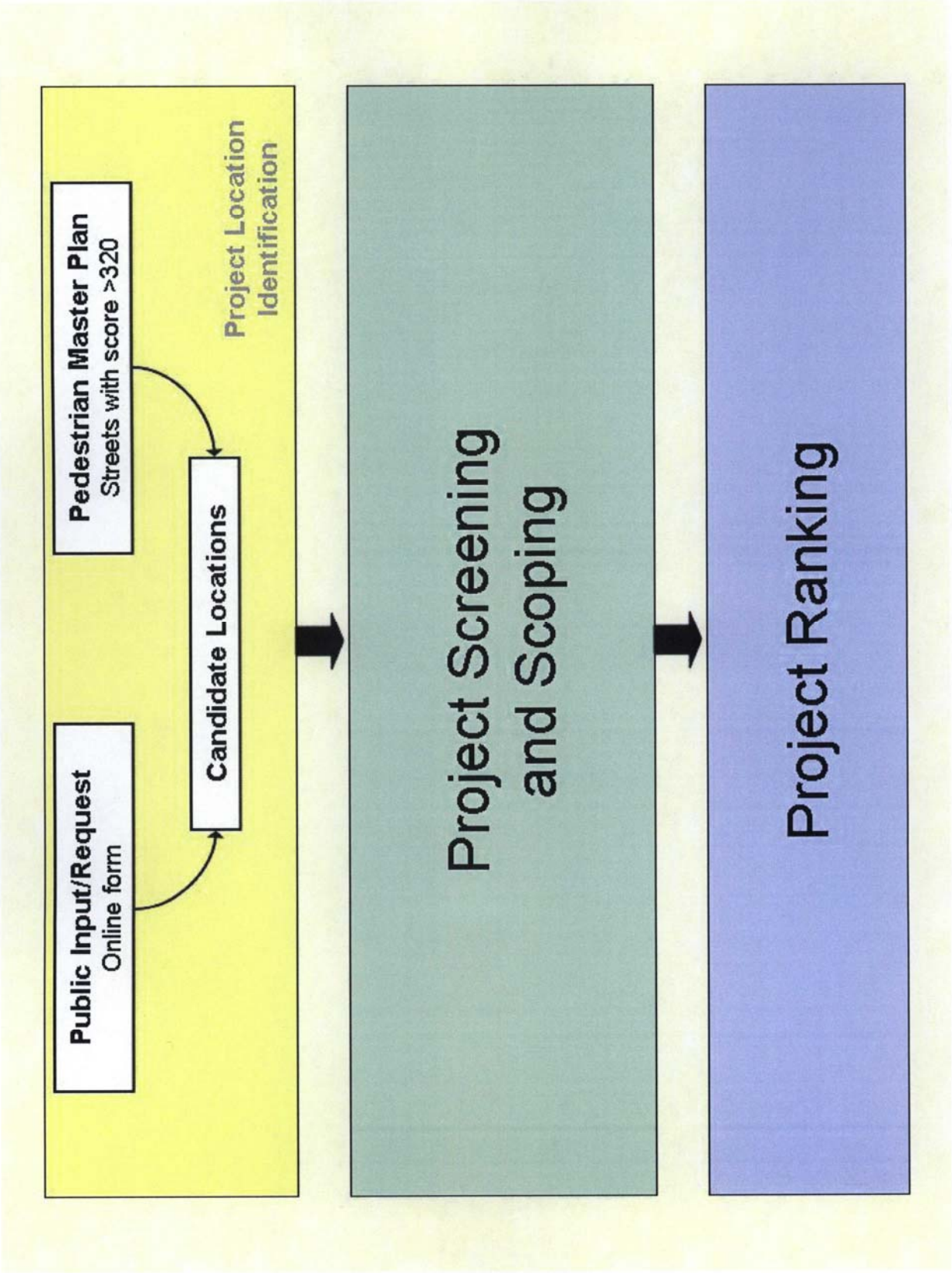
Traffic Signal Section Criteria

- Pedestrians
  - ✓ Activity Centers
  - ✓ Crossing Distance/Traffic Volumes
- Collisions – use Collision Rate
- Volumes – Range Changes
- Speed – Use 85th Percentile vs. Posted Speed
- Point Allocation Modified

Transportation Programming Guide

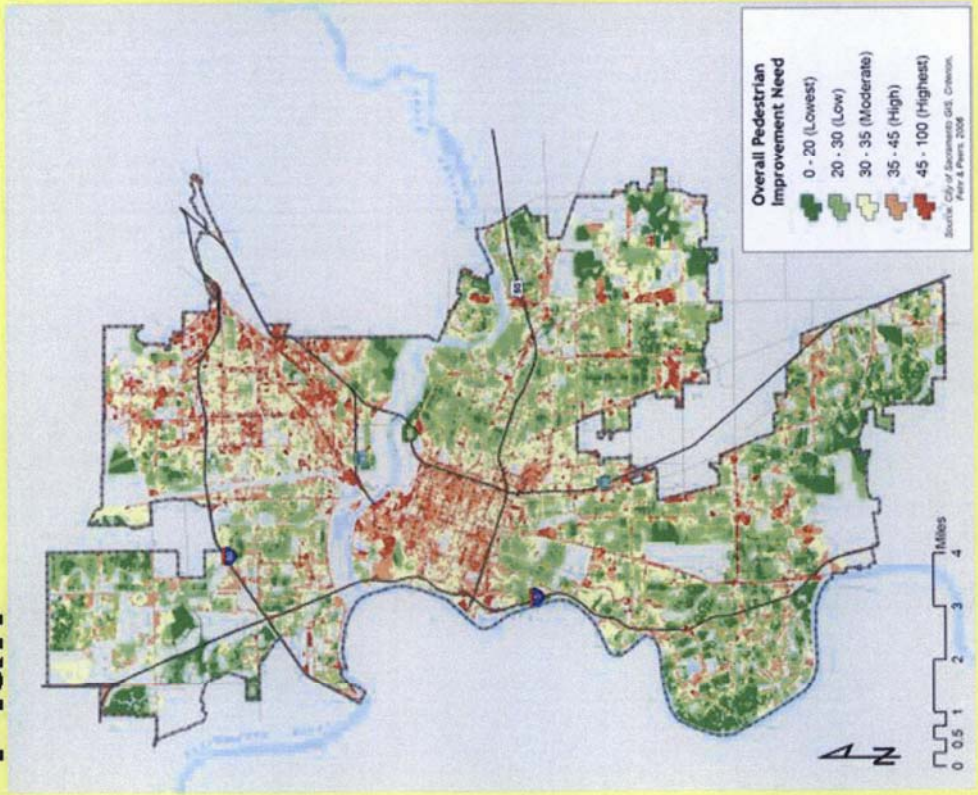
Pedestrian Section


Project Location Identification
Project Screening and Scoping
Project Ranking


Public Input/Request
Online form
Pedestrian Master Plan
Streets with score >320
Candidate Locations
Project Location Identification
Project Screening and Scoping
Project Ranking

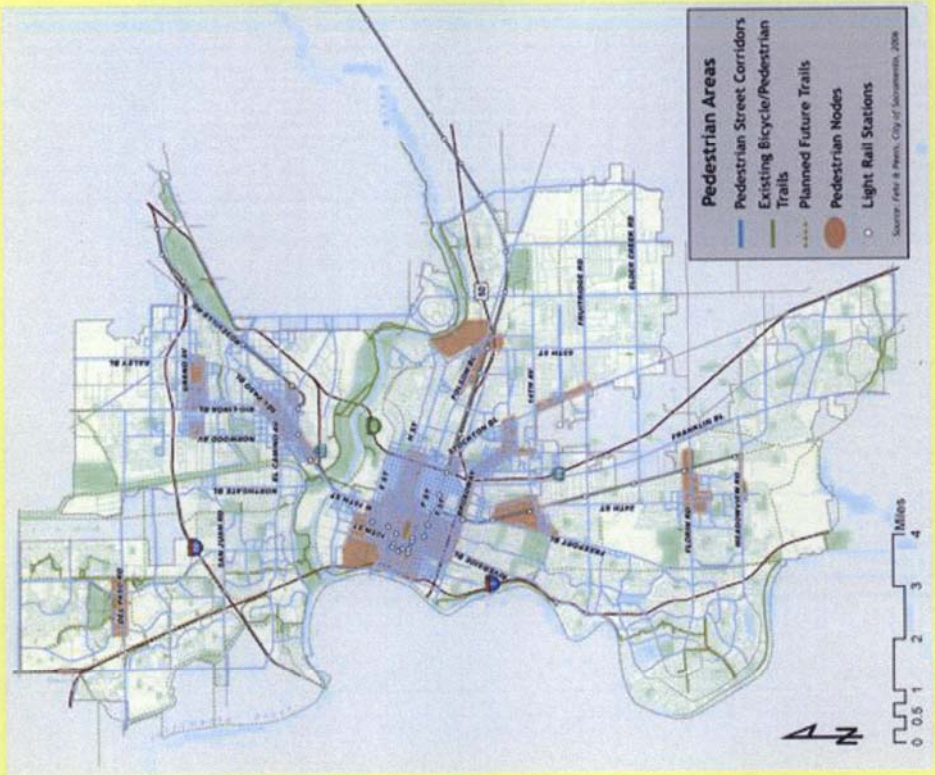
Pedestrian Master Plan Composite Needs Map:

- Red indicates high need locations
- Green indicates low need locations



Pedestrian Master Plan

- All streets identified into the three categories:
- Basic – all streets
- Upgrade – specific corridors
- Premium – high use areas



Public Input/Request Form

- Identification of person making request
- Location of requested project
- Type of facility requested
- Any special considerations?

Pedestrian Improvement Request Form

Contact name_____

Address _____ Phone _____ email _____

Location of project

_____ between _____ and _____
Street name *Street name* *Street name*

or

_____ at _____
Street name *Approximate address*

or intersection at

_____ and _____
Street name *Street name*

Type of needed facility (check all that apply):

- ☐ Damaged sidewalk
- ☐ Missing sidewalk
- ☐ Obstructed sidewalk
- ☐ Damaged curb and gutter
- ☐ Missing curb and gutter
- ☐ Insufficient curb ramp
- ☐ Missing crosswalk
- ☐ Need for improved crossing
- ☐ Need for improved street lighting
- ☐ Need for streetscape enhancements
- ☐ Other, please specify below:

_____

Please describe any special considerations that would make this project a high priority.

_____

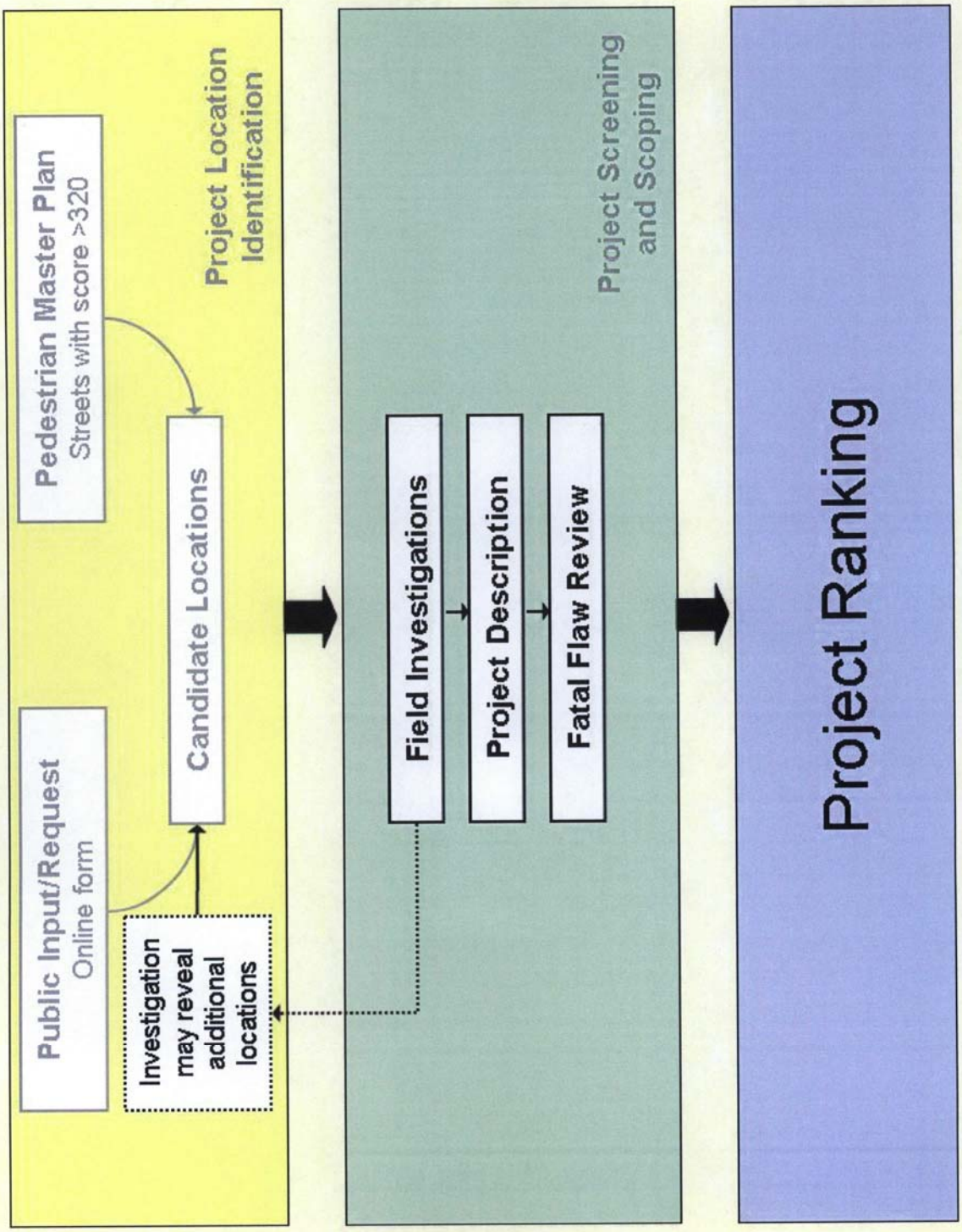
_____

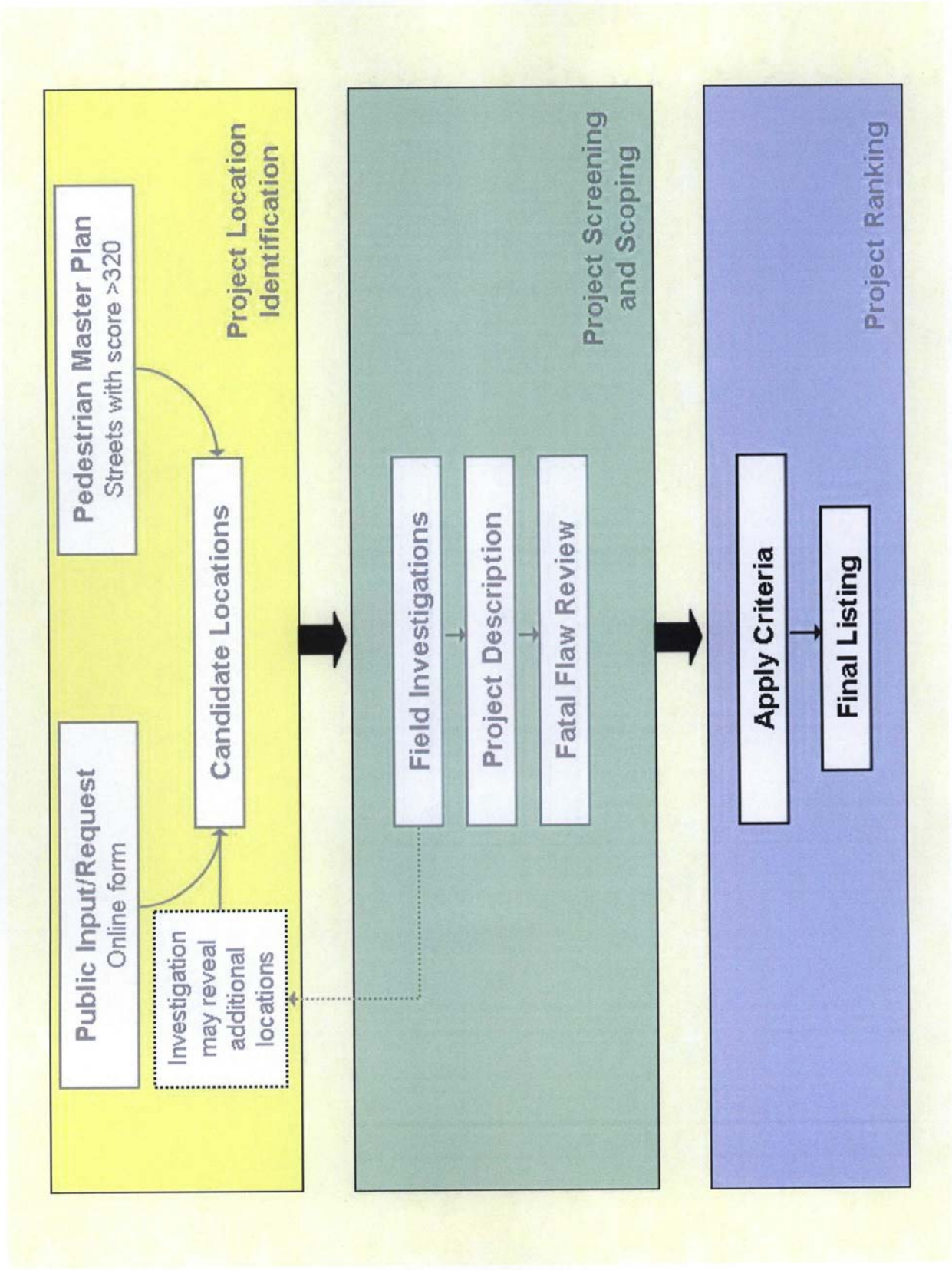
_____

_____

Thank you for your project idea. After reviewing the proposal we will contact you to indicate how we will proceed.

Staff Use:
Deficiency score_____ Demand score_____ Composite score_____
PMP target category: Basic Upgrade Premium
Qualified to proceed with field investigation: _____Yes _____No
Prepared by:_____ Date:_____
Responded to applicant by:_____ Date_____


Project Location Identification
Pedestrian Master Plan
Streets with score >320
Public Input/Request
Online form
Candidate Locations
Investigation may reveal additional locations
Project Screening and Scoping
Field Investigations
Project Description
Fatal Flaw Review
Project Ranking


Project Location Identification
Pedestrian Master Plan
Streets with score >320
Public Input/Request
Online form
Candidate Locations
Investigation may reveal additional locations
Project Screening and Scoping
Field Investigations
Project Description
Fatal Flaw Review
Project Ranking
Apply Criteria
Final Listing

Criteria for ranking projects

Safety oriented criteria

Project setting criteria

Total 100 points

Criteria for ranking projects

Safety oriented criteria

Points	*Description*
15	Barrier Elimination
15	Infrastructure Completeness (new)
10	Vehicle/Pedestrian Collisions
10	Speed
10	Volume

Criteria for ranking projects

Project Setting Criteria

Points	*Description*
5	Transit Access
5	Economic Development
5	Infill Development
5	Adjoining Property (new)
10	Land Use (new)
10	Activity Centers

Barrier Elimination Criteria

Project's ability to remove obstacles for safe travel or to introduce a shorter travel distance.

Infrastructure Completeness (new)

Project's ability to improve existing conditions to bring into compliance with the assigned category of Basic, Upgrade or Premium.

Vehicle/Pedestrian Collisions

Reported collision between car and pedestrian that occurred during the previous three years.

Speed

Posted speed limit at the project location. Intersection projects shall use the highest posted speed limit of the streets.

Volume

Average Daily Traffic (ADT) at the project location.

Adjoining Property (new)

Based on the orientation of the development at the back of sidewalk, or where the sidewalk would be when a sidewalk is not present.

Land Uses (new)

Points are assigned to a project based on the predominant adjacent General Plan land use designation.

Activity Centers

Points are assigned to activity centers within a 600 foot radius to its parcel boundary.

Transit Access

Project enables direct access to transit.

Economic Development

Project falls within the Economic Development Strategy

Infill Development

Project falls within the Infill Development Areas

Sidewalks to Schools

(Current City Priority List)

- Projects solicited from school administrations
- Includes 74 schools of all grade levels
- Does not include intersection crossing improvements

Merging with Pedestrian Improvements Section

- Similar criteria
- Puts all pedestrian improvement programs in one location
- Reduces redundancy and confusion
- Retaining ability to identify school related projects within the list

Criteria Comparison

Sidewalks to Schools
10 pts. ADT (volume)
25 pts. No. of Students
10 pts. Posted Speed
35 pts. Existing Condition
10 pts. Infill Development
10 pts. Car-Ped. Collisions
100 pts. Total

Pedestrian Improvements
10 pts. Volume
10 pts. Activity Centers (schools)
10 pts. Speed
15 pts. Infrastructure Completeness
5 pts. Infill Development
10 pts. Car-Ped. Collisions
60 pts. Subtotal

additional criteria:
15 pts. Barrier Elimination
5 pts. Transit Access
5 pts. Economic Development
5 pts. Adjoining Property
10 pts. Land Use
100 pts. Total

Criteria Comparison

Sidewalks to Schools
10 pts. ADT (volume)
25 pts. No. of Students
10 pts. Posted Speed
35 pts. Existing Condition
10 pts. Infill Development
10 pts. Car-Ped. Collisions
100 pts. Total

Pedestrian Improvements
10 pts. Volume
10 pts. Activity Centers (schools)
10 pts. Speed
15 pts. Infrastructure Completeness
5 pts. Infill Development
10 pts. Car-Ped. Collisions
60 pts. Subtotal

additional criteria:
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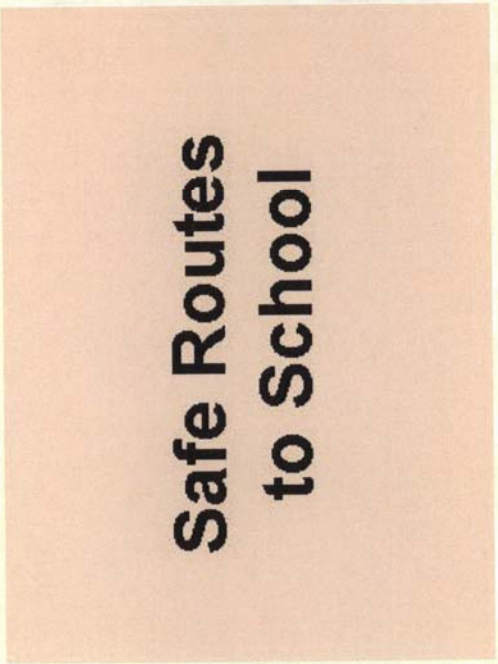
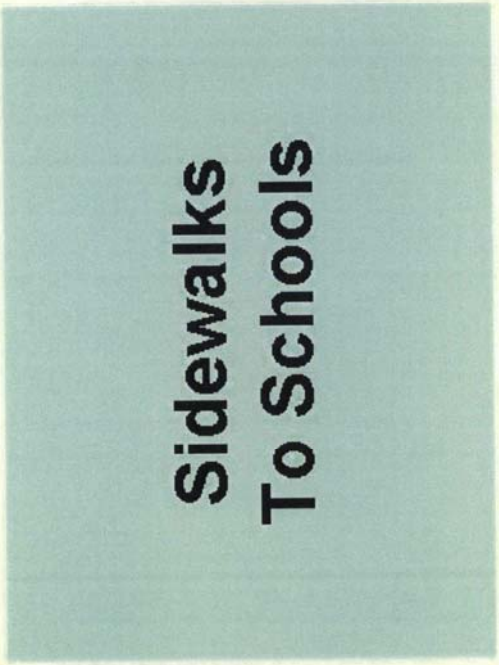
5 pts. Transit Access
5 pts. Economic Development
5 pts. Adjoining Property
10 pts. Land Use
100 pts. Total


Safe Routes
to School

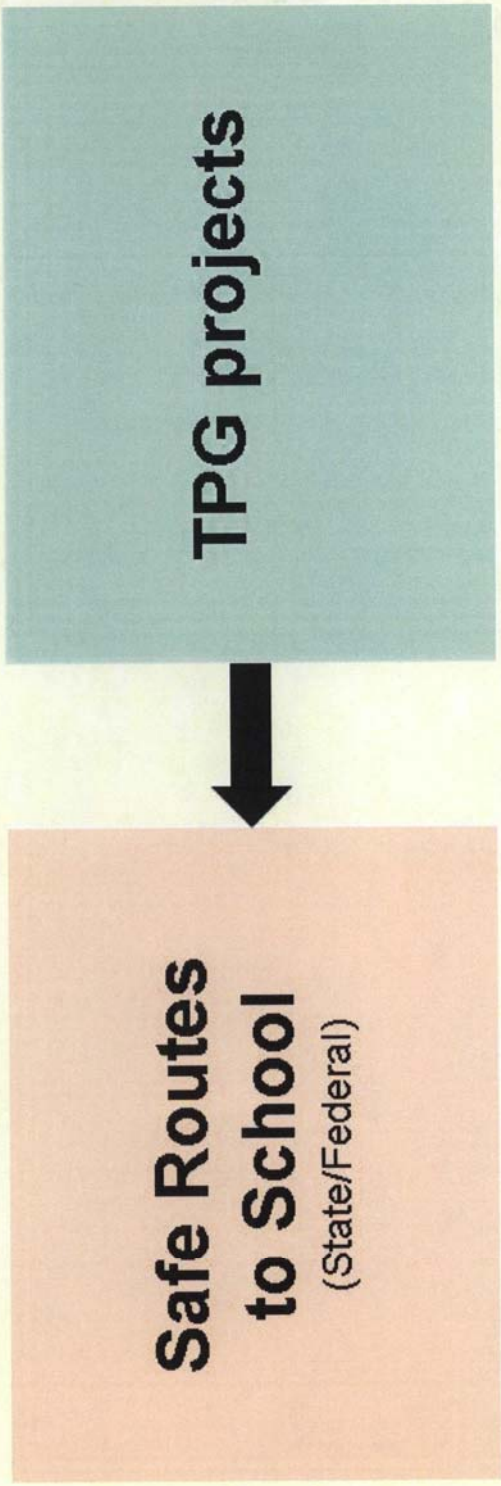

Sidewalks
To Schools

Safe Routes to Schools

(State/Federal Funding Program)

- Funding programs administered by the State of California Department of Transportation (Caltrans)
- Two programs: one is Federally funded; the other is State Funded.
- Funding for any project that will increase the safety for walking and biking to school

A useful tool would be a way to identify projects in the TPG that could apply for Safe Routes to Schools funds.



Aligning projects to the fund

- Identifying projects that could apply.
- Calling-out in the scored and ranked listing.
- Indicating whether K-8 or high school.
- Confirm that projects are a route to school.
- Confirming that projects serve a large number of students that would walk to school