



FILED
OFFICE OF THE CITY CLERK
OAKLAND

2015 OCT -1 PM 12:28 **AGENDA REPORT**

TO: Sabrina B. Landreth
City Administrator

FROM: Brooke A. Levin
Director, Public Works

SUBJECT: Grand Avenue Bike Lanes

DATE: September 8, 2015

City Administrator Approval

Date:

9/30/15

RECOMMENDATION

Staff Recommends That The City Council Approve:

A Resolution Authorizing The Removal Of Travel Lanes And The Installation Of Class II Bicycle Lanes On Grand Avenue From Elwood Avenue To Jean Street.

EXECUTIVE SUMMARY

The City's Bicycle Master Plan proposes that bicycle lanes be installed on the portion of Grand Avenue between Elwood Avenue and Jean Street, at the City border with Piedmont. In order to install the bicycle lanes, travel lanes must be modified from two in each direction to one per direction, a center turn lane, and separate 5-foot bike lanes. The project does not change existing on-street parking. It also provides for traffic calming and increases pedestrian safety. The project, if approved, will be implemented in Fall 2015 or Spring 2016, weather permitting.

To date, three community meetings have taken place over the past summer, including a site walk explaining project features, which was led by City staff. The project was also presented to the Bicycle and Pedestrian Advisory Commission (BPAC) in June. In advance of the community meetings held in July and August, over 400 mailers were sent to addresses within the project limits. Over 250 comments have been received, with 68 percent of respondents expressing support for the project.

The estimated cost of implementing the proposed project is \$25,000, and the cost of the traffic feasibility study and design is approximately \$45,000. Funds are available from Measure B Local Streets and Roads funds deriving from Alameda County sales tax for transportation programs.

BACKGROUND/LEGISLATIVE HISTORY

The City of Oakland's Bicycle Master Plan, part of the Land Use and Transportation Element of the Oakland General Plan, calls for the implementation of a citywide network of bikeways to connect downtown, transit stations, commercial districts, neighborhoods, and the waterfront.

Item: _____
Public Works Committee
October 13, 2015

The plan was originally adopted in 1999, comprehensively updated in 2007, and reaffirmed by City Council in 2012.

The Grand Avenue project would implement the following General Plan policies from the Land Use and Transportation Element (LUTE) and the Bicycle Master Plan (BMP):
LUTE Policy T4.10 – Converting Underused Travel Lanes: Take advantage of existing transportation infrastructure and capacity that is underutilized. For example, where possible and desirable, convert underused travel lanes to bicycle or pedestrian paths or amenities.

BMP Policy 1B – Routine Accommodation: Address bicycle safety and access in the design and maintenance of all streets.

BMP Policy 1C – Safe Routes to Transit: Improve bicycle access to transit, bicycle parking at transit facilities, and bicycle access on transit vehicles.

The projects would implement the City's Complete Streets policy direction as codified in the Oakland Municipal Code Chapter 12.02 (Complete Streets Design Standards) and elaborated in City Council Resolution No. 84204 C.M.S (Complete Streets Policy for the City of Oakland):

The City of Oakland will plan, design, construct, operate, and maintain appropriate facilities for pedestrians, bicyclists, transit users of all abilities, children, the elderly, and people with disabilities as a routine component of new construction, reconstruction, retrofit, and maintenance projects...

Complete Streets infrastructure is sufficient to enable reasonably safe travel along and across the right of way for each category of users will be incorporated into all planning, funding, design, approval, and implementation processes for any construction, reconstruction, retrofit, maintenance, operations, alteration, or repair of streets...

The City of Oakland will incorporate Complete Streets infrastructure into existing streets to improve the safety and convenience of all users, with the particular goal of creating a connected network of facilities accommodating each category of users...

The proposed restriping of travel lanes to remove a travel lane and install bike lanes on Grand Avenue is consistent with the City's General Plan, Bicycle Master Plan, and Complete Streets Policy.

The City's Bicycle Master Plan Policy 3C requires City Council approval of projects that remove travel lanes for the installation of bikeways. On Grand Avenue, the proposed project would add a bicycle lane by reducing the number of travel lanes from two travel lanes in each direction to one lane, plus a center left-turning lane between Elwood Avenue and Jean Street at the Piedmont city limits (**Attachment A**).

ANALYSIS AND POLICY ALTERNATIVES

Project Description

The proposed Grand Avenue bikeway from Elwood Avenue to Jean Street provides an important link in the bikeway network, connecting the Grand Avenue commercial district to the Piedmont city limits at Jean Street and Wildwood Avenue, where the City of Piedmont adopted an identical lane configuration as part of its bicycle and pedestrian master plan in November 2014. The current configuration of two lanes per direction would change to one lane per direction, a center two-way left turn lane, and separate bike lanes adjacent to the existing diagonal parking at the intersections of Jean Street, Boulevard Way, Sunnyside Avenue, Weldon Avenue and Mandana Boulevard, separated left turn lanes are provided. In between these blocks, the center turn lane provides access to and from driveways fronting on Grand Avenue. Green bike lane markings will be installed, per the City's standard practice, in areas where there are conflicts with motorized vehicles.

Further west of Elwood, the recent (Spring 2015) roadway resurfacing project installed shared bicycle/vehicle lane markings (also known as "sharrows") through the core commercial area to Lakepark Avenue/Santa Clara Avenue, in conformance with recommendation of the 2007 Bicycle Master Plan. A short segment of separate (Class II) bike lanes continues under the Interstate 580 Freeway to MacArthur Boulevard. From there, the bikeway again reverts to a shared bicycle/vehicle lane for two short blocks, then again becomes a Class II bikeway to downtown Oakland.

Pedestrian, Bicycle and Vehicle Safety

The proposed project will provide substantial roadway safety benefits in several ways:

Reducing lanes from 2 to 1 is often called a "road diet"; according to research documented in the American Association of State Highway Transportation Officials (AASHTO) Highway Safety Manual (HSM), road diets converting a four-lane undivided roadway to a three-lane roadway reduce total crashes (i.e., crashing involving motorists, pedestrians, and/or bicyclists) by approximately 29 percent.

Reduction of Multiple Threat - The reduction of travel lanes from 2 to 1 in each direction will eliminate what is known as the "multiple threat crash risk". This risk occurs when a motorist in one lane stops for a crossing pedestrian and – in the process – visually screens the pedestrian from the view of motorists in the other lane. This situation is a contributing factor to many pedestrian/vehicle crashes at mid-block and uncontrolled intersections.

Reduction of Vehicular Speeds - One of the primary safety benefits associated with road diets is the overall reduction of excessive speeds. On Grand Avenue, the most recent survey of vehicle speeds was performed in 2013. The critical, or 85% percentile speed, of vehicles was measured at 32mph, higher than the regulatory speed of 25mph. The critical speed is the benchmark speed used in traffic engineering to set speed limits on roadways. Reducing the number of lanes, where traffic analysis shows it to be feasible, is an effective and inexpensive

method of reducing speeds to more closely match the regulatory speed limit, thereby increasing safety and reducing risk of injury for all transportation modes. Lower overall speeds have a significant benefit to reducing the severity of pedestrian collisions.

Additional Buffer Space - The provision of a 5-foot wide bike lane, with an adjacent 3-wide buffer area between the diagonal parking spaces and the bike lane, provides an 8-foot wide area for pedestrians to enter and be seen before crossing into traffic.

Traffic Analysis

Motor vehicle, pedestrian and bicycle volumes were collected at key intersections in the corridor in April 2015, and supplemented with data previously collected by the City of Piedmont in August 2014. The traffic operations analysis results are shown in Table 1, Existing Traffic Conditions Analysis:

TABLE 1-Existing/Proposed Traffic Conditions Analysis

Grand Avenue at:	AM Peak Hour				PM Peak Hour			
	Existing Conditions		With Road Diet		Existing Conditions		With Road Diet	
	Delay*	LOS	Delay*	LOS	Delay*	LOS	Delay*	LOS
Jean St/Wildwood Avenue	9.7	A	10.6	B	10.5	B	12.1	B
Boulevard Way	17.6	C	16.0	C	18.8	C	20.5	C
Sunnyslope Avenue	13.6	B	12.5	B	12.6	B	16.5	C
Weldon Avenue	13.6	B	13.0	B	19.7	C	17.4	C
Mandana Avenue	24.5	C	28.4	C	12.8	B	25.3	C
Elwood Avenue	4.8	A	7.3	A	8.6	A	11.8	B
Highway Capacity Manual 2000 methodology								
Synchro Version 9								
Source: Kittelson & Associates, 2015								

**Delay is expressed in seconds of delay, during the AM or PM peak periods, and represents the average amount of time a vehicle experiences delay at an intersection, compared with a free-flow condition.*

It is City of Oakland policy that Grand Avenue, as with most streets, should perform at Level of Service (LOS) E or better. The LOS measures motorist delay and designates the level of service of a facility with a letter, A to F, with A representing the most free flowing operating conditions. However, LOS A is not necessarily the ideal condition and in fact may indicate that an intersection is overbuilt and higher speeds often result, which is a negative impact for pedestrians and overall safety in an urban setting. It also focuses on individual intersections rather than the corridor as a whole. In any case, the traffic analysis shows that all of the intersections along Grand Avenue operate at LOS C or better, under both existing and project conditions.

Under the proposed project conditions, the traffic operations analysis indicates the road diet has minimal impact on delay for motorists; the majority of the study intersections are expected to have changes in average delay of less than five seconds or a reduction in average delay of up to five seconds in the weekday AM and PM peak conditions. The intersection at Mandana Avenue is expected to experience the largest increase in average delay at 13 seconds during the PM peak hour. The traffic operations results indicate that the study intersections will continue to operate at acceptable levels of service per the City of Oakland's performance thresholds if the road diet is implemented.

Transit Operations

This segment of Grand Avenue is served by AC Transit's Line 12, which provides local service to Downtown Oakland and to Berkeley. During peak AM and PM hours, the Line 12 provides service at 20-minute headways. Although there will be minor increases in travel times on the corridor, which will affect transit and other motorized vehicles, the buses will no longer need to share a travel lane with bicycles due to the addition of a separate bicycle lane. AC Transit is evaluating the plan for potential impacts and working with City staff to make any necessary revisions. No significant changes are anticipated as the result of the review process.

Bicycle Facilities

Within the project limits, Grand Avenue has a four-lane cross-section (two vehicle lanes in each direction) with on-street head-in diagonal parking on both sides of the street. Under the proposed project conditions, Grand Avenue will have a three-lane cross-section (one vehicle lane in each direction with a center two-way left turn lane), bicycle lanes in each direction, and on-street parking on both sides of the street.

On-Street Parking

Parking within the project limits exists as angled, head-in parking stalls. No changes are proposed as part of the project. Many comments and requests were received requesting that the City consider restriping the parking stalls to *back-in* angle parking instead of the head-in parking that exists now. Back-in angle parking has certain advantages in the right location. However, after studying installations across the U.S. and discussing with other cities, staff does not recommend installing back-in angle parking for this project, given the commercial character of the corridor, high traffic volumes, and lack of similar examples that have been successfully implemented elsewhere. However, the proposed restriping of lanes does create an additional 3-foot buffer area between the parking stalls and the proposed bike lanes, which offers an additional measure of safety for cyclists.

Alternatives Considered

As the result of the BPAC and community review process, a number of alternative project features were evaluated and considered. More information on the community outreach process is detailed in the Public Outreach/Interest section of this report. The sections below summarize

the three most-requested modifications to the project, staff's considerations, and final recommendations:

Alternative #1	Implement back-in angle parking
Pros	Better visibility for drivers pulling out of parking spaces.
Cons	More difficult for drivers to back in; unfamiliarity with this type of parking; larger stalls required, resulting in potential reduction of spaces; back of vehicles may overhang sidewalk; exhaust expelled towards sidewalk-undesirable where outdoor uses, e.g. restaurants, cafes, exist.
Reason for not recommending	<p>-Inconsistency with other segments of Grand Avenue. Consistency is an important safety consideration of design.</p> <p>-Lack of other similar installations anywhere else in the U.S. A review of locations throughout the U.S. failed to identify locations with similar traffic patterns where back-in angle parking has been implemented successfully. Other similar locations have traffic volumes of less than 10,000 vehicles per day; Grand Avenue is currently at 16,500 vehicles per day. The City will be piloting back-in angled parking in other locations to better understand how traffic volumes may affect operations of streets with back-in angle parking.</p> <p>-Potential loss of a number of spaces. Back-in angle parking is generally designed with larger spaces than front-end angle parking, meaning that the switch would potentially result in a loss of some on-street parking supply in an area with currently high parking demand and occupancy rates.</p>

Alternative #2	Extend the project southward, to I-580/Santa Clara Avenue.
Pros	Provides a more continuous bikeway.
Cons	No funding identified or budgeted; work has not been done to define a project concept; greater vehicle traffic volumes; additional work includes traffic analysis, design; community outreach; staff resource impact to other ongoing projects.

Reason for not recommending	<p>There is currently no defined alternate project to extend a bikeway from Elwood to Santa Clara Avenue. The recent paving project marked bike “sharrows” in the #2 lane as the proposed bikeway, per the City’s adopted Bicycle Master Plan. The current proposed effort is a striping-only project that could be delivered as part of the recent resurfacing of the roadway so the cost of implementation is primarily for the operations analysis and staff time with minimal cost for striping Grand Avenue.</p> <p>If the proposed section of Grand Avenue (Elwood to Jean) is implemented and positive responses are received, the City can use this support to continue the design of a bikeway on Grand Avenue between MacArthur Boulevard and Elwood Avenue, which will require support and extensive participation from the merchants/businesses that will be affected, as well as additional funding.</p> <p>Major scope changes, such as those proposed in this alternative, should be considered as part of a comprehensive update to the existing Bicycle Master Plan.</p>
Alternative #3	Install a parking-protected bike lane, instead of one next to moving traffic.
Pros	Provides a sense of safety and comfort to many bike riders.
Cons	Challenging to implement next to deep (15-foot) diagonal parking stalls; potential safety issues next to the many driveways.
Reason for not recommending	<p>-Separation requires additional design elements at driveways and intersections to ensure a safe implementation. Bicyclists are less visible to right-turning motorists since they are offset from vehicle travel lanes by more than 16 feet. The density of driveways and intersections along this corridor would create several potential conflict points that would require more design effort and study than available resources permit at this time.</p> <p>-The width of Grand Avenue is not sufficient for a protected bicycle lane. The vehicle lane would need to be widened if the bicycle lane was relocated between the parking and the sidewalk in order to allow for safe and efficient entry and exit from the parking stalls. This extra travel lane width would likely result in a protected bicycle lane of insufficient width.</p> <p>-The engineering associated with moving parking and designing intersection treatments for separated bike lanes is beyond the scope and budget of this project.</p>

FISCAL IMPACT

The striping of bike lanes and road diet on Grand Avenue will be implemented as part of the City's ongoing resurfacing program, which recently resurfaced this portion of Grand Avenue. The funding is coming from the Measure B Local Streets and Roads Fund (2211); Streets and Structures Organization (92242); Street Construction Account (57411); Citywide Street Resurfacing (C427710); estimated cost \$25,000.00.

Funding for consultant services to develop the project concept and perform the traffic analysis is being provided by Measure B Local Streets and Roads Fund (2211); Transportation Services Organization (92246); Architectural and Engineering Contracts Account (54411); Traffic Signal Management Program (C427910); cost \$44,834.

PUBLIC OUTREACH/INTEREST

To date, the formal public engagement process has included four public meetings:

- **Bicycle and Pedestrian Advisory Commission (BPAC):** On June 18, 2015, Public Works Transportation Services Division (TSD) staff and their consultant, Kittleson Associates (Oakland) made a presentation to the BPAC and public attendees.
- **Public Meeting:** On July 8, 2015 a public information meeting was noticed via flyers sent through the mail to all addresses within 400 feet of the project (See flyer, **Attachment B**). The flyer was also sent to the Grand Avenue Business Association, five neighborhood and community organizations, and to AC Transit and the City of Piedmont. Approximately eighty members of the public attended this meeting, as well as representatives from AC Transit and the City of Piedmont.
- **Walking Tour:** On Saturday, July 25, 2015, a community walking tour, led by City staff and consultants, was held. The tour was announced at the end of the July 8 public meeting and all attendees that submitted an email address were also notified. Twenty-two members of the public attended the walking tour.
- **Public Hearing:** In accordance with Government Code section 6061, on July 25, 2015, the City published notice of a public hearing to be held on August 12, 2015, to consider the proposed restriping of travel lanes to remove a travel lane and install bike lanes on Grand Avenue between Elwood Avenue and Jean Street. That notice was published in the Oakland Tribune, a newspaper of general circulation in the area affected by the proposed projects. As required by Public Resources Code section 21080.20.5, on August 12, 2015, the City held a duly noticed public hearing at Barnett Hall, 3534 Lakeshore Avenue, to hear and respond to public comments on the project. Approximately forty (40) persons attended.

To date, out of 253 total respondents who returned the flyer, 204 expressed either explicit approval or disapproval for the project. The breakdown is as follows:

- 138 respondent support the proposed project (**68 percent**)
- 57 respondents oppose the proposed project (**28 percent**)
- 9 respondents would support the proposed project only with modifications (**4 percent**)

Comments received and City's responses to comments are included in (**Attachment C**).

COORDINATION

The Public Works Department is responsible for planning, designing, funding, implementing, and maintaining bicycle capital projects. The Planning and Building Department was consulted for the filing of the environmental documents described under "CEQA" below. In addition, the Office of the City Attorney and the City's Controller's Bureau reviewed this report and resolution.

SUSTAINABLE OPPORTUNITIES

Economic: Bikeways promote bicycling, one of the most cost-effective forms of transportation. Bicycle trips tend to be local and thus are more likely to contribute to local economic activity. The construction of bikeways creates more jobs than other transportation projects of comparable cost due to the low material costs but high labor costs of installing roadway striping and signs.

Environmental: Bicycling is the most energy efficient form of transportation and creates no emissions. The development of Oakland's bikeway network is a key strategy in the City's efforts to reduce greenhouse gas emissions. Bicycle infrastructure promotes physical activity and good health.

Social Equity: Bicycling is an inexpensive and broadly accessible form of transportation. Bikeways provide added freedom and independence for youth and parents (who are otherwise shuttling their children) as well as for some people who cannot drive and those who have chosen not to drive. Road diets are a studied and proven low-cost measure that improve roadway safety, most notably for pedestrians.

CEQA

These actions are exempt from CEQA pursuant to Public Resources Code Section 21080.20.5 (restriping of streets and highways for bicycle lanes in an urbanized area that is consistent with a bicycle transportation plan) and CEQA Guidelines Sections 15183 (projects consistent with general plan and zoning), 15301 (existing facilities), 15304 (minor alterations), and 15061(b)(3) (no significant effect on the environment).

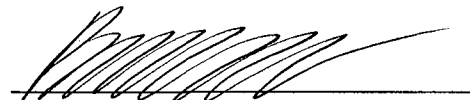
ACTION REQUESTED OF THE CITY COUNCIL

Staff Recommends That The City Council Approve:

A Resolution Authorizing The Removal Of Travel Lanes And The Installation Of Class II Bicycle Lanes On Grand Avenue From Elwood Avenue To Jean Street.

For questions regarding this report, please contact Wladimir Wlassowsky, Transportation Services Division Manager, at (510) 238-6383.

Respectfully submitted,



BROOKE A. LEVIN
Director, Oakland Public Works

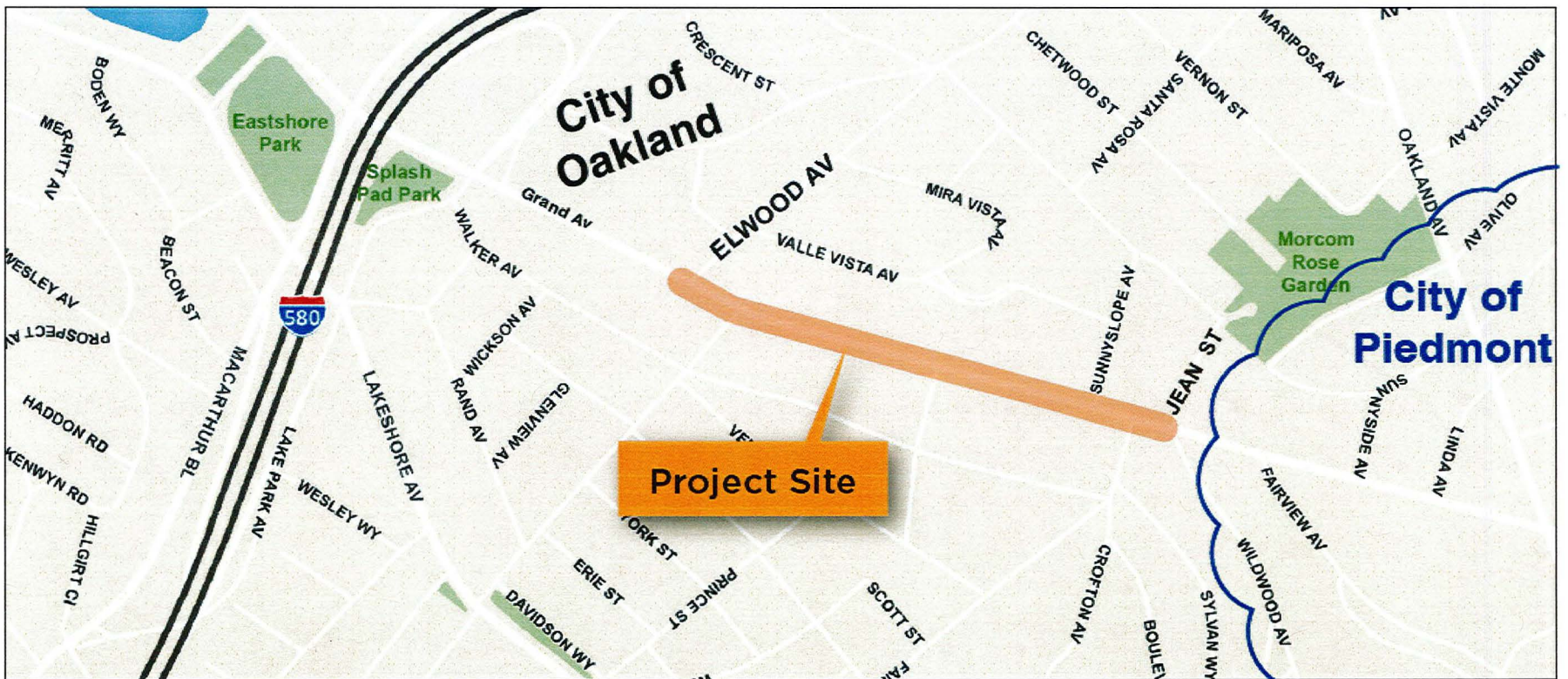
Reviewed by:
Michael J. Neary, P.E., Assistant Director
OPW, Bureau of Engineering and Construction

Prepared by:
Wladimir Wlassowsky, P.E., Manager
Transportation Services Division

Attachments (3):

- A: *Grand Avenue Bike Lanes – Project Area Map*
- B: *Outreach Flyer (includes diagram) – Grand Avenue Road Diet Elwood Ave. to Jean St.*
- C: *Response to Public Comments*

ATTACHMENT A
GRAND AVENUE BIKE LANES
PROJECT AREA MAP





Grand Avenue Road Diet Elwood Ave. to Jean St.

Description

The City of Oakland is planning a road diet on Grand Avenue from Elwood Avenue to Jean Street. The project will reallocate the paved area to improve safety for road users. The current two travel lanes per direction are proposed to change to one vehicle lane and a bicycle lane each way and a center two-way left turn lane. See proposed street cross-section on the other side of the flyer. Construction is anticipated in Fall 2015.

City staff is conducting outreach in the neighborhoods to present the proposed project and solicit feedback. Community members are invited to attend a meeting on July 8, 2015 at Barnett Hall behind Lakeshore Avenue Baptist Church (3534 Lakeshore Avenue) from 7:00 PM to 9:00 PM.

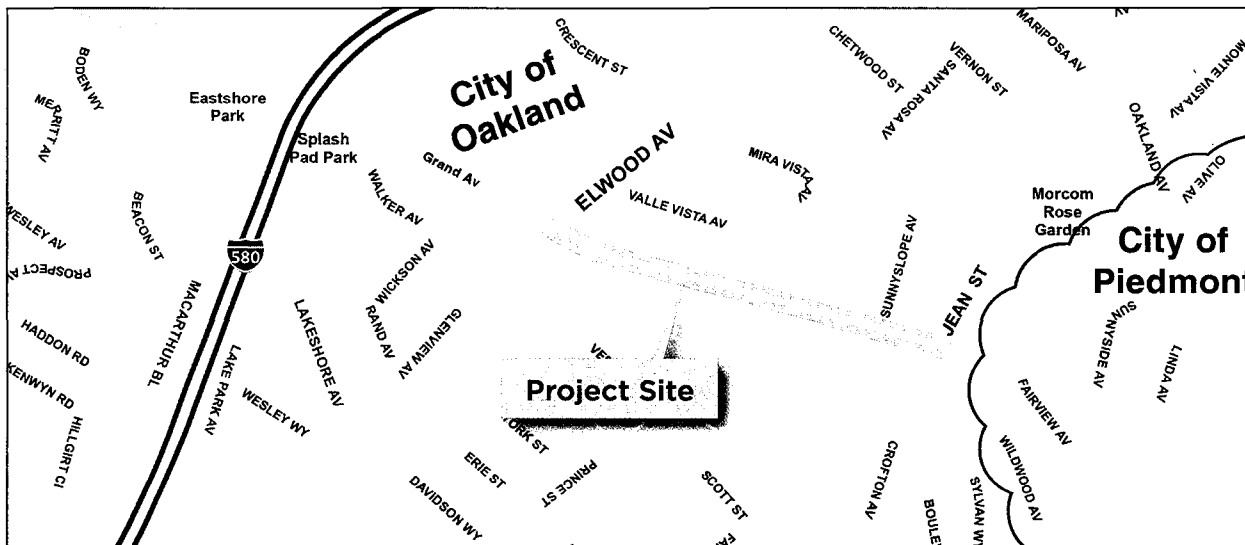
Project Benefits

The Grand Avenue Road Diet project improves safety and access for roadway users including

motorists, pedestrians, bicyclists, and transit riders. Potential benefits of the Grand Avenue Road Diet Project include:

- **Reduced number of travel lanes for pedestrians to cross when crossing Grand Avenue**
- **Enhanced visibility for pedestrians crossing Grand Avenue**
- **Reduced vehicle conflicts and collisions for vehicles turning onto and off of Grand Avenue**
- **Improved access and comfort for bicyclists**
- **Improved compliance with posted speed limits on Grand Avenue**
- **Improved safety for left turning vehicles**

Additional information on the benefits of road diets can be found in the FHWA Road Diet Informational Guide (http://safety.fhwa.dot.gov/road_diets/info_guide/)



Submit Comments

Please provide your input by **Wednesday, July 15, 2015**. To use this form, write your comments below and your return address on the reverse, cut along the dotted line, stamp and mail. Or, you may e-mail: **PHO@oaklandnet.com** or fax (510-238-7415) your comments. Please include your name and street address and indicate you are commenting on the **Grand Ave Road Diet**.

Please check one of the following three boxes, and then provide supporting comments.

- I support the Road Diet.
- I do not support the Road Diet.
- I have no opinion.
- Undecided

Signature

(Also write name and address on reverse before mailing.)

REQUIRED INFORMATION

Name: _____

Address: _____

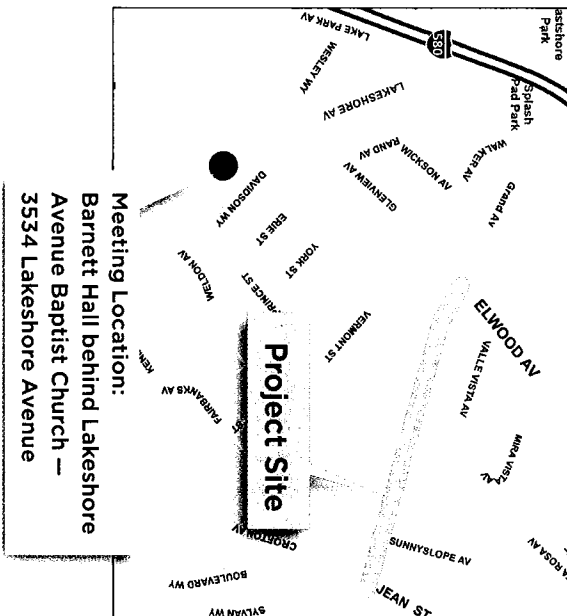
Oakland, CA _____
(ZIP Code)

**49 cents
stamp
required**

**City of Oakland, Public Works Department
Transportation Services Division
Attn: Philip Ho
250 Frank Ogawa Plaza, Suite 4344
Oakland, CA 94612**

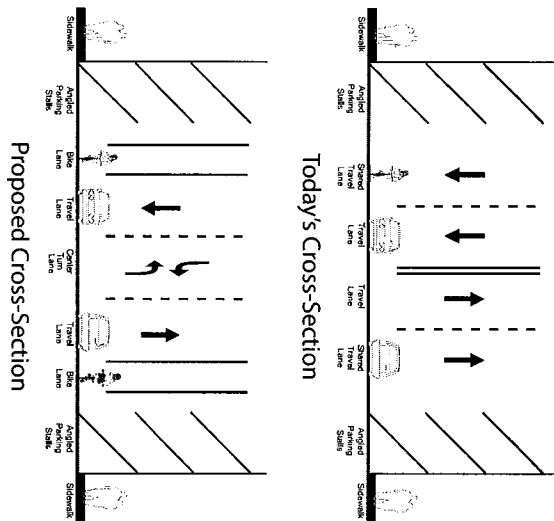


City of Oakland, Public Works Department
Transportation Services Division
250 Frank Ogawa Plaza, Suite 4344
Oakland, CA 94612



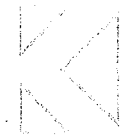
Meeting Location:
Barnett Hall behind Lakeshore
Avenue Baptist Church —
3534 Lakeshore Avenue

Community Meeting
Wednesday, July 8, 2015
7:00 PM to 9:00 PM



**Grand Avenue
Road Diet**
Typical cross-section
Elwood Ave. to Jean St.

Attachment C



KITTELSON & ASSOCIATES, INC.

TRANSPORTATION ENGINEERING / PLANNING

155 Grand Avenue, Suite 900, Oakland, CA 94612 510.839.1742 510.839.0871

MEMORANDUM

Date: September 17, 2015

Project #: 17121

To: Transportation Services Division
City of Oakland

Oakland, CA

From: Aaron Elias, P.E. and Michael Alston

Project: Grand Avenue Road Diet

Subject: Response to Public Comments

EXECUTIVE SUMMARY

This memorandum summarizes and provides responses to public comments received on the proposed Grand Avenue road diet. This proposed project would implement a four to three lane road diet on Grand Avenue from Elwood Avenue to approximately Wildwood Avenue/Jean Street. The project would reallocate the paved area to improve safety for road users by replacing one vehicle lane in each direction with dedicated bicycle lanes and a center left turn lane. Further details can be found on the project's website:

<http://www2.oaklandnet.com/Government/o/PWA/s/Projects/GrandAve/index.htm>.

Of 217 total respondents, 172 expressed explicit approval or disapproval of the project:

- 115 respondents (67%) said they support the project;
- 51 respondents (30%) oppose the project;
- The remaining 6 respondents (3%) said they would support the project only with modifications.

A majority of the respondents either expressed specific concerns with the project as proposed or had direct questions. The top five most common concerns included:

- A preference for back-in angled parking;
- A desire to extend the project boundary south to Interstate 580;
- A preference for protected bike lanes;
- Concerns over increased traffic congestion;
- Concerns over increased delay from parking maneuvers.

RESPONSE SUMMARY

Responses were collected via email, mailed responses to a distributed flyer, and hand-submitted comments from a community meeting on July 8, 2015, and a community walk-through on July 25, 2015. Two hundred seventeen (217) responses have been submitted on the Grand Avenue road diet project. Of the 217 responses, 172 expressly supported or opposed the road diet plan, while another 45 respondents provided feedback but did not state their opinion on the plan as a whole. Another 77 respondents only responded to cast a “Yes” or “No” vote on the project, but did not raise specific concerns or questions. The breakdown of respondents’ opinions is given in Table 1.

Table 1: Respondents' Opinions on Road Diet

	Supports Road Diet Plan	Percent of Total Respondents	Percent of Those Expressing an Opinion
Yes	115	53%	67%
Yes, with Modifications	6	3%	3%
No	51	23%	30%
Decline to State	45	21%	-
Total	217		

The responses were categorized by their specific concerns with the project to understand what comments were most common. The concerns voiced most often are listed in

Table 2, with the number of respondents expressing that particular concern. Many respondents raised multiple concerns; those comments were sorted into appropriate categories. Although the table lists only the ten most common concerns, this memo addresses all concerns expressed in the section that follows.

Table 2: Top Ten Topics from the Responses Received

Top 10	Number of Respondents
Request for back-in angled parking	30
Request the project area be extended to I-580	22
Preference for protected bike lane	21
Increased traffic congestion	17
Increased traffic congestion from parking maneuvers	11
Desire for additional pedestrian safety measures	9
Concern about side street diversions	9
Delivery Trucks (congestion and safety)	5
Sees no need for the project	5
Wants parallel parking to accommodate protected bike lane	5

Many respondents asked direct questions. Those questions are addressed in the final section of this memo. Many direct questions overlapped with concern areas, in which case they were categorized appropriately and are addressed in the Responses to Comments/Concerns section.

RESPONSES TO COMMENTS/CONCERNS

- 1. Thirty respondents expressed a desire for the project to include a conversion to back-in angled parking, rather than the existing front-end angled parking.**

The City of Oakland will be piloting back-in angled parking at other locations. There are three main concerns with implementing back-in angled parking on Grand Avenue:

- It would be inconsistent to implement back-in angle parking for this portion of Grand Avenue between Elwood Avenue and Jean Street/Wildwood Avenue and leave the remaining portion between I-580 and Elwood Avenue as is with front-in angle parking. Consistency is an important safety consideration of design.
- A review of locations throughout the country where back-in angle parking has been implemented generally shows these facilities have traffic volumes of less than 10,000 vehicles per day. Grand Avenue is currently at 16,500 vehicles per day. The City will be piloting back-in angled parking in other locations to better understand how traffic volumes may affect operations of streets with back-in angle parking.
- Back-in angle parking is generally designed with larger spaces than front-end angle parking, meaning that the switch would potentially result in a loss of some on-street parking supply.

2. Twenty-two respondents asked for the project area to be extended south to Interstate 580.

The City would like to do more, but the capacity is limited and it was decided an incremental approach was best and more realistic given the available resources at this time. Taking on the larger project puts it on a much longer schedule. It also means that other projects that the City is currently working on either don't get done or are deferred until later. The current proposed effort is a striping-only project that could be delivered as part of the recent resurfacing of the roadway so the cost of implementation is primarily for the operations analysis and staff time with minimal cost for striping Grand Avenue.

If the proposed section of Grand Avenue is implemented and positive responses are received, the City would like to see a public call for a concerted effort to tackle the section of Grand Avenue between MacArthur Boulevard and Elwood Avenue, which will require support and extensive participation from the merchants/businesses that will be affected, as well as much more funding.

3. Eighteen respondents want a protected bike lane (a bike lane between parked cars and the sidewalk) rather than a traditional bike lane.

There are a few drawbacks associated with the protected bike lane that make it infeasible at this time:

- The separation requires additional design elements at driveways and intersections to ensure a safe implementation. Bicyclists are less visible to right-turning motorists since they are offset from vehicle travel lanes by more than 16 feet. The density of driveways and intersections along this corridor would create several potential conflict points that would require more design effort and study than available resources permit at this time.
- The street's right-of-way width is likely not wide enough to provide sufficient space for a protected bicycle lane. The vehicle travel lane would need to be widened if the bicycle lane was relocated between the parking and the sidewalk in order to allow for safe and efficient entry and exit from the parking stalls. This extra travel lane width would likely result in a protected bicycle lane of insufficient width.
- The engineering associated with moving parking and designing intersection treatments for separated bike lanes is outside of the available resources of the City at this time.

4. Seventeen respondents expressed concerns about traffic congestion from the reduction in travel lanes.

A traffic analysis has been conducted to assess the impact of the road diet during the worst hour on a typical weekday morning commute and the worst hour on a typical evening commute. The increases in travel time to travel the length of the corridor are given in the table below.

Table 3: Travel Time Increases (Current Year) from Elwood Avenue to Wildwood Avenue/Jean Street

	Northbound Travel Time Change (sec)	Southbound Travel Time Change (sec)
AM Peak	+28	+10
PM Peak	+32	+9

In the AM peak period, no intersection was found to incur more than 4 seconds of additional delay on average. In the PM peak period, no intersection incurs more than 4 seconds of additional delay on average, with the exception of Mandana Boulevard. The average additional delay at Mandana Boulevard is anticipated to be 13 seconds. This higher increase is due primarily to incorporating an exclusive southbound left turn phase from Grand Avenue to Mandana Boulevard to improve safety for vehicles and pedestrians. All intersections operate within the acceptable standards of the City of Oakland.

This analysis considered the impact of parking maneuvers within 250 feet of the signalized intersections. Parking maneuvers taking place greater than 250 feet from the signalized intersections are not anticipated to add any additional travel time on the corridor since the traffic signals are generally the controlling feature of corridor travel time.

5. Eleven respondents expressed concern over traffic congestion stemming from parked motorists backing into what will be the only travel lane.

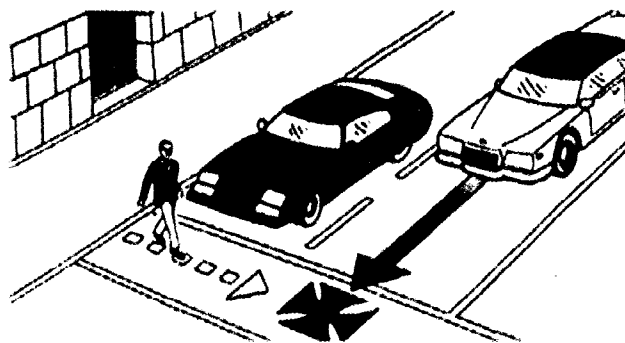
The delay analysis referenced in Table 3 includes parking maneuvers within 250 feet of intersections. The methodology only includes maneuvers within that area because the delay at intersections has been found to control travel time on the corridor rather than potential midblock delays from parking maneuvers. Because the intersection delay is the controlling feature, travel time delays occurring outside this 250-foot area are not anticipated to cause changes in corridor travel time.

6. Nine respondents expressed a desire for additional pedestrian safety measures; including Rapid Flashing Beacons (push button controlled flashing lights at midblock crosswalks).

Rapid flashing beacons are not part of the proposed project at this time as the road diet incorporates many improvements for pedestrians:

- Fewer vehicle travel lanes to cross and the ability to cross the street in two stages
- Enhanced visibility for pedestrians crossing Grand Avenue
- Lower speeds on the corridor, increasing motorists' sight distance and stopping ability.
- Elimination of the "multiple threat" depicted in Figure 1.

Figure 1: Illustration of Multiple Threat



Source: Center for Advanced
Infrastructure and Transportation

While bike accommodations are one benefit of a road diet, the proposed project also provides numerous benefits to pedestrian safety. Should additional pedestrian enhancements be desired after the road diet implementation, they can be considered as part of future improvements on Grand Avenue as funding allows.

7. Nine respondents expressed concern about drivers potentially diverting to Walker Avenue to traverse the corridor.

Research from the Federal Highway Administration has shown that side street diversions will likely not be prevalent on Grand Avenue, which carries about 16,500 vehicles per day:

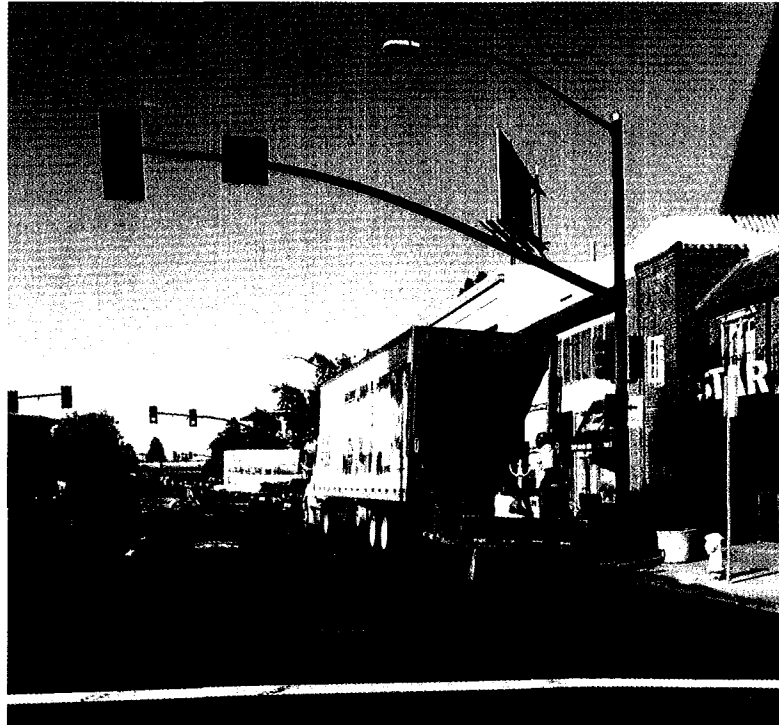
Under most annual average daily traffic (AADT) conditions tested, road diets appeared to have minimal effects on vehicle capacity because left-turning vehicles were moved into a common two-way left-turn lane (TWLTL). However, for road diets with AADTs above approximately 20,000 vehicles, there is an increased likelihood that traffic congestion will increase to the point of diverting traffic to alternative routes.¹

With Grand Avenue specifically, a diversion study on Walker Avenue was performed to determine what the likelihood of diversion. This study showed that even with the implementation of the proposed road diet, Grand Avenue was still faster than diverting to Walker Avenue. Details of this study can be found on the Project's webpage.

¹ <http://www.fhwa.dot.gov/publications/research/safety/10053/10053.pdf>

8. Five respondents are concerned with where delivery drivers will park while making their deliveries.

Based on observations in the field, many deliveries appear to take place in the morning when parking activity is at a minimum. Delivery vehicles in the morning will still be able to occupy the diagonal parking available today as shown below.



When the parking is occupied, trucks will likely park in the two-way left turn lane or the bicycle lane as they do in other parts of Oakland. In both cases, the widths of the two-way left turn lane (10 feet) and the bicycle lane plus spacing (8 feet) are sufficient to have only minimal intrusion into the vehicle travel lane.

9. Five respondents see no need for the project altogether, citing an insufficient number of cyclists.

The purpose and benefit of this road diet project are not simply to re-designate motor vehicle space to cyclists. The reduction of travel lanes and lane width will reduce speeding and improve crossings for pedestrians. Also, the inclusion of a two-way left turn lane will reduce delays caused by left-turning motorists. Other benefits of the project are enumerated on the website referenced in the executive summary.

10. Five respondents prefer parallel parking to accommodate a protected bike lane.

A conversion to parallel parking would result in approximately half of the street parking being removed in this already heavily parked study area. As a result, parallel parking was not considered as part of the scope of this project. See the response to comment number 3 above for a discussion on protected bicycle lanes.

11. Five respondents expressed concern about the difficulty of the southbound left turn from Grand Avenue onto Mandana Boulevard.

The proposed plan includes a protected left turn phase onto Mandana Boulevard (a dedicated green arrow for left-turning motorists). This protected phase does create delay for through movements along Grand Avenue (as shown in Table 3) but addresses this issue and increases safety at this intersection.

12. Four respondents, having observed cyclists run through stop signs or red lights, expressed concern supporting over scofflaw cyclist behavior.

Cyclists are subject to the same traffic control laws as motorists. Enforcement of those laws is a function of law enforcement.

13. Three respondents expressed concern over delivery driver safety, under the assumption that drivers will park in the two-way left turn lane.

As stated above, delivery drivers will likely double park in the bicycle lane similar to how they double park today or use the two-way left turn lane. It will be up to the delivery drivers to determine the safest place to park their vehicles.

14. Three respondents wanted a median throughout the corridor.

This project is simply a striping project and does not include the budget or scope for any infrastructure enhancements. Additionally, because of the density of driveways along the corridor, the two-way left turn lane provides full access.

15. Three respondents asked for clarification regarding the transition area.

For southbound drivers, the lane transition will occur at Grand Avenue and Elwood Avenue. For northbound drivers, the outer lane will be a dedicated right-turn lane at the intersection with Mandana Boulevard, with only one through lane after that point. A full striping plan is available on the project website, referenced in the Executive Summary.

16. Two respondents explicitly expressed safety concern over head-in angled parking.

The reduction in speeds that will result from the project should help reversing drivers more safely maneuver. Additionally, the bicycle lane will be in the middle of the existing outside travel lane which will improve visibility of both the bicyclist and vehicles since they will be farther away.

17. Two respondents expressed concern about additional traffic congestion for drivers entering Grand Avenue from Mandana Boulevard.

There is a projected average increase in delay of 3.9 seconds in the AM peak and 12.5 seconds in the PM peak for all drivers at this intersection. In the AM peak hour, the level of service (LOS) score remains a C; in the PM peak hour, it moves from a B to a C. These LOS results are well above the City's LOS D standard.

18. Two respondents wanted a traffic signal at Grand Avenue and Weldon Avenue.

Traffic signals are generally only placed where they meet a set of criteria detailed in the California Manual on Uniform Traffic Control Devices (CAMUTCD). This manual uses conflicting vehicle volumes and side-street delay to assess the need for a signal. A review of the peak hour signal warrant in this manual shows that the intersection of Weldon Avenue and Grand Avenue does not currently meet the peak hour criteria in the AM or PM peak hours.

19. Two respondents expressed concern over consistency with the adjacent portion of Grand Avenue in Piedmont.

Provided this project is approved in a timely fashion, the City of Oakland has already discussed coordinating efforts with a similar project in Piedmont to ensure consistency across boundaries.

20. Two respondents expressed concern over an abundance of U-turns along the corridor.

With the provision of the two-way left turn lane, motorists will have the opportunity to move out of through traffic before such a maneuver can be legally completed. This will reduce the impact of turning vehicles on through traffic movements.

21. One respondent suggested that businesses will suffer when drivers no longer want to visit Grand Avenue as a result of this project.

Similar efforts across Oakland and the nation have shown beneficial or no impact on the local economy after implementation of a road diet². Additionally, the traffic volumes on Grand Avenue suggest the area is suitable for implementing a road diet without significant transportation impacts.

22. One respondent contended that businesses would be willing to lose parking in favor of better bicycle facilities.

This idea is beyond the scope of this project at this time. Future studies along Grand Avenue can consider this as part of a broader corridor implementation.

23. One respondent expressed concern about head-on collision risk from drivers using the two-way left turn lane as a through lane.

This concern is noted. However, drivers will be traveling at lower speeds after the road diet, with better ability to react, and less prone to make such errors in judgment. The two-way left turn lane is anticipated to function in the same manner as many other two-way left turn lanes located in the Bay Area.

24. One respondent wanted street trees to be included with this project.

Such improvements are beyond the scope of this project.

25. One respondent expressed the need for dedicated loading spaces, and another respondent suggested that delivery vehicles should park in the two-way left turn lanes.

There is no explicit assignment of delivery vehicle space along the corridor, except for at Safeway, which has off-street parking. The dispersed nature of the shops on the corridor make defined loading zones an inefficient use of space since delivery trucks will still park as close to their delivery points as possible.

26. One respondent wants the City to charge higher fees for double parking.

This comment is noted, but it is outside of the scope of this project.

² <http://la.streetsblog.org/2012/09/25/economic-review-of-6th-street-road-diet-shows-bike-lanes-dont-cause-loss-of-business/>; <https://domz60.wordpress.com/2013/03/12/the-economic-merits-of-road-diets/>

27. One respondent wanted to focus on improving the Mineta Transportation Institute's Level of Traffic Stress (LTS) score.

The LTS score is one available metric for evaluating a bicycle facility. The inputs to that metric include street width, number of lanes, traffic speed, and bike lane blockage. The ability to further improve the LTS score is constrained by the scope of what this project will be able to accomplish within the available budget.

28. One respondent wants a leading pedestrian interval at Mandana Boulevard.

The response will be taken under consideration during the determination of final signal timings at the improved Mandana Boulevard signal.

29. One respondent wants more public sitting space.

This project is a striping only project and does not include the resources for infrastructure projects such as more public sitting spaces.

30. One respondent wants the current street cross section to remain the same with the addition of green paint in the outer travel lane.

In Oakland, this treatment is only featured along 40th Street between Adeline Street and Martin Luther King, Jr. Way. This particular treatment is part of a state and federal experiment and is not ready for more implementation sites. Additionally, green paint is typically used only to highlight high conflict areas between cyclists and motorists, not as a continuous treatment which can dilute its effectiveness.

RESPONSES TO QUESTIONS

I. Is head-in angled parking adjacent to bike lanes found anywhere else in Oakland?

(Defer to city)

II. Is there room for a buffer for the bike lane?

There is a 3 foot buffer provided on the curb side of the 5 foot bicycle lane (between parked cars and people on bicycles). This will provide additional separation between bicyclists and parked vehicles.

III. What historical stats do you have on the volume of use of each crosswalk?

The City does not have historical crosswalk usage statistics but does have a recent count of pedestrian activity from April 2015 in the AM and PM peak periods. This information can be provided upon request by emailing pho@oaklandnet.com

IV. What are historical statistics on volume of cyclists?

The City does not generally track historical bicycle data. AM and PM peak period bicycle counts are available on the project website, referenced in the Executive Summary.

V. Can you supply me with the traffic volume in each area?

The traffic volumes in the project area are available on the project website, referenced in the Executive Summary.

VI. Does your outreach plan include any other activities beyond the community meeting?

Yes. We have sent mailers to addresses near the project, held a community meeting on July 8, and held a walking tour of the project area on July 25. Additionally, there will be another community meeting on the project on Wednesday, August 12, at 7pm at Barnett Hall.

VII. What statistics do you have on current speeding behavior in the plan area?

A speed study was conducted and is available at the project website, referenced in the Executive Summary.

VIII. Regarding the transition between the study area and the rest of Grand Avenue at Elwood: Is a turn lane from Grand Avenue to Elwood Avenue included? Will the reduction in lanes be between Elwood and Mandana or before Elwood?

There will be no dedicated right- or left-turn lane from Grand Avenue onto Elwood Avenue. For southbound drivers, the lane transition will occur for southbound drivers at Grand Avenue

and Elwood Avenue. For northbound drivers, the outer lane will be a dedicated right-turn lane at the intersection with Mandana Boulevard, with only one through lane after that point. A full striping plan is available on the project website, referenced in the Executive Summary.

IX. What purpose will the left turn lane between Elwood Avenue and Sunnyslope Avenue serve, since there are no left turns for northbound drivers?

The proposed lane is a two-way left turn lane, so it will provide a place for northbound and southbound motorists to safely wait for left turn availability. In the northbound direction there are a number of driveways on the left hand side and three parking lots requiring left turns (including the Safeway parking lot).

X. Has there been a traffic study of Grand Avenue in the proposed area?

Yes. The technical analysis has been completed and it is currently being written up. Once completed, the findings of the traffic study will be posted on the project website, referenced in the Executive Summary.

XI. Have there been any similar commercial areas with the same kind of plan?

There are many other streets in the City that have had a road diet implemented. One street that has had a road diet and bike lane implemented in an area with angle parking is Bancroft Avenue between 66th and 67th Avenue, although the bike lanes are not continuous.

XII. What about the proposal to put a median strip in the middle of Grand Avenue for bikes?

Such a solution is outside the resources and scope of this project. This road diet is only a striping project and does not include infrastructure or construction.

XIII. How many cars typically use the lanes at peak and off-peak hours?

The collected traffic data, including vehicle counts, can be downloaded from the project website referenced in the Executive Summary.

XIV. How many pedestrian refuges will there be?

The two midblock crosswalks will feature pedestrian refuges denoted by removable bollards and striping. One will be at Margene's Bridal between Mandana Boulevard and Weldon Avenue, and the other will be at Safeway between Weldon Avenue and Sunnyslope Avenue.

XV. What will the configuration be at Mandana Boulevard and Grand Avenue heading toward Piedmont?

The full striping plan, with lane configurations throughout, is available on the project website referenced in the executive summary.

XVI. What would the Mineta LTS score be for back-in angled parking and separated bike lane options?

The LTS methodology does not take into account front-end versus back-in angled parking, so a conversion would leave the LTS score unchanged. Physically separated bikeways like a separated bike lane score an LTS 1, suitable for almost all cyclists. More information on the LTS methodology can be found at the following link:

<http://transweb.sjsu.edu/PDFs/research/1005-low-stress-bicycling-network-connectivity.pdf>

XVII. What type of parking/bike lanes are planned for Grand Avenue in Piedmont?

Because of a narrower roadway, Piedmont's redesigned portion of Grand Avenue will feature parallel parking. The rest of the lane configuration will be the same.

XVIII. Is delay calculated based on the 25 miles per hour posted speed limit or the 32 miles per hour prevailing speed?

Delay is based on traffic simulation software that takes into account the speed limit and other factors such as delay at the signals. It does not explicitly account for prevailing speeds.

XIX. Why were the badly broken cement gutters not replaced during repaving?

With the recent repaving, a limited amount of repair work was done. The repair work done was mostly limited to curb ramps at intersections, but most of the effort was focused on repairing the roadways themselves.

XX. Why are you using level of service (LOS) for analysis on this project when it's no longer used in California?

Although California is moving away from LOS as the only official performance measure for impacts of new development, it is still a viable measure for evaluating delay at intersections and along a corridor. LOS is one of many performance measures used in the industry.

XXI. Have you considered historic volumes on Grand Avenue?

The analysis has not incorporated travel demand models or historic volume data.

XXII. When I cross a multi-lane street on foot, I have to wait in front of a car to make sure the next car will stop. How much travel time will the reduction to one lane save from this delay?

This delay is essentially negligible compared to the controlling delay at the intersections (as previously discussed). It is not accounted for in the analysis methodology.

XXIII. How may I obtain a copy of the full version of the traffic study report prepared for the Grand Avenue Road Diet?

The full analysis will be made available on the project's website, referenced in the Executive Summary when it is completed.

XXIV. How many people attended the Saturday walk?

Twenty-two people signed the sign-in sheet.

XXV. How long will construction last?

This project will not entail any construction and will only be a re-striping project.

FILED
OFFICE OF THE CITY CLERK
OAKLAND

2015 OCT -1 PM 12:28

OAKLAND CITY COUNCIL

Approved as to Form and Legality


City Attorney

RESOLUTION No. _____ C.M.S.

Introduced by Councilmember _____

RESOLUTION AUTHORIZING THE REMOVAL OF TRAVEL LANES AND THE INSTALLATION OF CLASS II BICYCLE LANES ON GRAND AVENUE FROM ELWOOD AVENUE TO JEAN STREET

WHEREAS, the City of Oakland's Bicycle Master Plan was adopted by City Council on December 7, 2007 as part of the Land Use and Transportation Element of the City's General Plan and reaffirmed by City Council on December 4, 2012; and

WHEREAS, the City of Oakland's Bicycle Master Plan calls for the implementation of a citywide network of bikeways to connect downtown, transit stations, commercial districts, neighborhoods, and the waterfront; and

WHEREAS, the Bicycle Master Plan identifies Grand Avenue from MacArthur Boulevard to Jean Street as a proposed bikeway; and

WHEREAS, the Complete Streets Policy for the City of Oakland was adopted by City Council on February 5, 2013 and the Policy calls for the incorporation of bicycle lanes in reconstruction and maintenance projects to create a connected network of facilities for bicyclists; and

WHEREAS, Action 1B.1 of the Bicycle Master Plan states, "Include bicycle safety and access improvements in roadway resurfacing, realignment, and reconstruction projects"; and

WHEREAS, Grand Avenue from MacArthur Boulevard to Jean Street was recently resurfaced and have been designed to include useful bikeway connections; and

WHEREAS, the installation of bicycle lanes on Grand Avenue will reduce the number of travel lanes from four (4) through lanes to three (3) through lanes between Elwood Avenue to Jean Street; and

WHEREAS, installation of bicycle lanes on between Elwood Avenue to Jean Street is consistent with the City's General Plan, Bicycle Master Plan, and Complete Streets Policy; and

WHEREAS, City Council has directed staff to prepare reports for their approval when bicycle projects require the reduction of travel lanes on a roadway; and

WHEREAS, the Grand Avenue Bike Lane project will be constructed in conjunction with the paving of 17th Street, a project funded by Measure B Local Streets and Roads Fund (2211); Streets and Structures Organization (92242); Street Construction Account (57411); Citywide Street Resurfacing (C427710); \$3,785,000.00; and

WHEREAS, in accordance with Government Code section 6061, on July 25, 2015, the City published notice of a public hearing on August 12, 2015, to consider the proposed restriping of travel lanes to remove a travel lane and install bike lanes on Grand Avenue between Elwood Avenue to Jean Street; that notice was published in the Oakland Tribune, a newspaper of general circulation in the area affected by the proposed projects; and

WHEREAS, after a duly noticed public meeting on October 13, 2015, the Public Works Committee voted to recommend the proposal to the City Council; and

WHEREAS, on October 20, 2015, the City Council considered the proposed restriping of travel lanes to remove travel lanes and install bicycle lanes on Grand Avenue between Elwood Avenue to Jean Street; and

WHEREAS, the City has prepared an assessment of traffic and safety impacts of the project, which includes measures in the projects to mitigate potential vehicular traffic impacts and bicycle and pedestrian safety impacts, and concludes that the project will have negligible impacts on traffic operations and will not result in a decrease in safety for any travel mode; and

WHEREAS, each as a separate and independent basis, these actions are exempt from CEQA pursuant to Public Resources Code Section 21080.20.5 (restriping of streets and highways for bicycle lanes in an urbanized area that is consistent with a bicycle transportation plan) and CEQA Guidelines Sections 15183 (projects consistent with general plan and zoning), 15301 (existing facilities), 15304 (minor alterations), and 15061(b)(3) (no significant effect on the environment); now, therefore be it

RESOLVED: That the City Council authorizes the installation of bicycle lanes on Grand Avenue by reducing the number of travel lanes from four (4) through lanes to three (3) through lanes between Elwood Avenue to Jean Street; and be it

FURTHER RESOLVED: That the City Administrator or designee shall file a Notice of Determination/Notice of Exemption with the clerk of the County of Alameda and the Office of Planning and Research.

IN COUNCIL, OAKLAND, CALIFORNIA, _____

PASSED BY THE FOLLOWING VOTE:

AYES - BROOKS, CAMPBELL WASHINGTON, GALLO, GUILLEN, KALB, KAPLAN, REID and PRESIDENT GIBSON MCELHANEY

NOES -

ABSENT -

ABSTENTION -

ATTEST: _____
LaTonda Simmons
City Clerk and Clerk of the Council
of the City of Oakland, California