



Office of the City Manager

INFORMATION CALENDAR

May 12, 2015

To: Honorable Mayor and Members of the City Council

From:  Christine Daniel, City Manager

Submitted by: Andrew Clough, Director, Public Works

Subject: Traffic Evaluation of University Avenue Between Martin Luther King, Jr. Way and California Street

INTRODUCTION

This evaluation responds to Council's referral on December 16, 2014¹ to conduct a traffic control and safety analysis of the stretch of University Avenue between Martin Luther King, Jr. Way and California Street.

CURRENT SITUATION AND ITS EFFECTS

University Avenue is a 4-lane boulevard in an east-west direction, connecting I-80 on the west to downtown Berkeley on the east. The intersections along this corridor at Martin Luther King, Jr. Way (MLK) and California Street are signalized, and other intersections have crosswalks. There are parking spaces on both sides of University Avenue.

BACKGROUND

The Berkeley Pedestrian Master Plan² (adopted by Council in June 2010) entailed a comprehensive citywide analysis of pedestrian conditions utilizing the following 5 criteria to identify pedestrian improvement projects:

- 1. Community Access:** Is the project located near key pedestrian generators or attractors?
Measurements: Civic buildings, neighborhood commercial centers, parks, senior centers, schools, density of surrounding land uses
- 2. Transit Connectivity:** Is the project located near key transit access points?
Measurements: BART and Amtrak connections, AC Transit trunk lines, AC Transit local lines
- 3. Usage and Demand:** How many people are walking in the project area?
Measurements: Census journey to work data, Space Syntax forecasted volumes

¹ Evaluation and Traffic Control, University Avenue from MLK to California:
www.cityofberkeley.info/Clerk/City_Council/2014/12_Dec/Documents/2014-12-16_Item_24_Evaluation_and_Traffic_Control.aspx

² Berkeley Pedestrian Master Plan: www.cityofberkeley.info/pedestrian/

4. **Safety:** Will the project improve safety?

Measurements: Collisions, pedestrian exposure, traffic volumes and speeds

5. **Support and Need:** Is there an identified need for the project?

Measurement: Project is identified in an existing plan, public comment received

As a result of the analysis, the Pedestrian Master Plan presents a list of 34 high priority pedestrian projects, which includes intersections at both Grant Street (ranked 17) and McGee Avenue (ranked 21). The proposed project calls for consideration of the following measures:

Project 17: University Avenue and Grant Street

- Shorten the crossing distance and improve pedestrian visibility through bulbouts;
- Prohibit or restrict on-street parking in spaces immediately adjacent to southwestern corner on University Avenue and the southeastern corner on Grant Street;
- Install pedestrian flashing beacons for crosswalks across University Avenue;
- Install "Turning Traffic Must Yield to Pedestrians" signs for eastbound traffic on University Avenue.

Project 21: University Avenue and McGee Avenue

- Consider installing bulbouts at all 4 corners of intersection to improve pedestrian visibility and shorten crossing distance;
- Install new curb ramps with textured raised surfaces (also known as truncated domed surface) at all corners;
- Install in-pavement yield to pedestrian signs in median on both legs across University Avenue.

In addition, staff completed an evaluation of University Avenue between MLK and California, with the following results:

Field Check

University Avenue is a major street. Between MLK, Jr. Way and California Street there are 3 stop-controlled intersections, at Grant Street, McGee Avenue, and Jefferson Avenue. A STOP sign, stop line, and STOP pavement legend are in place on each of the stop-controlled approaches. The intersections at University Avenue at MLK, and University Avenue at California Street are signal-controlled.

1. 25 MPH speed limit signs are installed on University Avenue at 3 locations: 100 feet west of MLK, Jr. Way; 300 feet west of Grant Street; and on eastbound University Avenue near the intersection at Jefferson Avenue.
2. 25 MPH speed limit pavement legends are installed on University Avenue in each direction at all intersections, except at Jefferson Avenue.
3. High visibility crosswalks and pedestrian crossing warning signs are installed across University Avenue at each of the intersections, except at Jefferson Avenue.

4. Regulation lengths of red curbs are installed on all corners of the intersections, and the sight lines are adequate and clear.
5. Speed feedback panels with speed limit signs are installed at 2 locations: westbound University Avenue 100 feet east of McGee Avenue; and eastbound University Avenue 400 feet east of McGee Avenue.
6. All pavement markings, signs, and panels are in good condition.

Collision History

The 5-year (July 2008 to June 2013) reported collision history for the 3 stop-controlled intersections is summarized in this table.

Cross Street	Type of Collision							Total Collisions	Casualties	
	Rear-end	Head-on	Side-swipe	Broad-side	Hit Object	Vehicle-ped	Not Stated		Injured	Killed
Grant	2		3	5		1		11	6	0
Jefferson						1		1	1	0
McGee	2			3		1	1	7	2	0

Of the total 19 collisions: 2 of the 4 broadside collisions at Grant Avenue involved bicycles; no other collisions involved bicycle; and 3 of the collisions involved pedestrians.

Primary collision factors (PCF), corresponding numbers of collisions, and percentages of collisions to the total 11 collisions are summarized in this table.

PCF	Unsafe Speed	Improper Turning	Improper Passing	Unsafe Lane Change	Wrong Side of Road	Driving under influence	Auto RW Violation	Pedestrian Violation	Brakes	Other
Number of Collisions	4	2	1	2	1	1	4	1	1	2
Percentage of Collisions	21%	10%	5%	10%	5%	5%	21%	5%	5%	10%

Our research indicates that, of the 3 named stop-controlled intersections, Grant Street is 82 on the list of top 100 intersections ranked by reported collisions during the 5-year period, according to the California Highway Patrol database. The other 2 intersections are not among the top 100. A copy of the list is attached.

Evaluation

No pattern of safety issues can be drawn from the collision history of the 3 intersections. The data shows that speed was the primary contributing factor in 4 out of 19 collisions, and bicycles were involved in 2 of them over the 5-year period (July 2008 to June 2013).

ENVIRONMENTAL SUSTAINABILITY

This traffic speed and safety analysis does not have an effect on environmental sustainability.

POSSIBLE FUTURE ACTION

The City will implement recommendations of the Pedestrian Master Plan related to the intersections of University/Grant (Project 17) and University/McGee (Project 21) as funding becomes available.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

Depending on what is undertaken, costs could be up to \$475,000 for implementation of the full range of measures at Project 17 and Project 21 intersections (see page 2).

CONTACT PERSON

Hamid Mostowfi, Supervising Traffic Engineer, Public Works, 510-981-6403

Attachments:

1: Traffic Collision History Reports for intersections during July 2008 to June 2013

City of Berkeley

Traffic Collision History Report

4/2/2015
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Location: University Ave / Grant St
Date Range Reported: 7/1/2008 - 6/30/2013
Total Number of Collisions: 11

Report No.	Date	Time	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Direct. of Travel 1	Movement Prec. Coll. 1	Direct. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil
4020439	12/24/08	15:32	24	East	Broadside	Other Motor Vehicle	North	Making Left Turn	West	Proceeding Straight	Auto R/W Violation	1	0
4400494	8/4/09	11:10	4	South	Broadside	Bicycle	West	Proceeding Straight	North	Making Right Turn	Wrong Side of Road	1	0
4812934	6/15/10	14:42	0	In Int.	Sideswipe	Fixed Object	West	Proceeding Straight			Brakes	0	0
5545060	1/20/12	21:22	0	In Int.	Vehicle - Pedestrian	Pedestrian	West	Proceeding Straight	South	Not Stated	Driving Under Influence	1	0
5761584	5/8/12	15:31	0	In Int.	Broadside	Bicycle	West	Proceeding Straight	North	Proceeding Straight	Auto R/W Violation	1	0
5808519	7/11/12	11:44	0	In Int.	Broadside	Other Motor Vehicle	West	Making Right Turn	West	Not Stated	Improper Turning	1	0
5808540	7/29/12	11:14	5	East	Rear-End	Other Motor Vehicle	West	Slowing/Stopping	West	Stopped in Road	Unsafe Speed	0	0
5898692	12/14/12	11:15	0	In Int.	Sideswipe	Parked Motor Vehicle	South	Backing	Not Stated	Parked	Unsafe Starting or Backing	0	0
6057642	3/11/13	21:10	0	In Int.	Sideswipe	Other Motor Vehicle	West	Changing Lanes	West	Making U Turn	Unsafe Lane Change	0	0
6057606	3/21/13	0:13	0	In Int.	Broadside	Other Motor Vehicle	North	Making Left Turn	West	Proceeding Straight	Improper Turning	0	0
6083676	4/12/13	12:54	0	In Int.	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Slowing/Stopping	Unsafe Speed	1	0

City of Berkeley

Traffic Collision History Report

4/2/2015
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Location: University Ave / Mcgee Ave
Date Range Reported: 7/1/2008 - 6/30/2013
Total Number of Collisions: 7

Report No.	Date	Time	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Direct. of Travel 1	Movement Prec. Coll. 1	Direct. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil
4635924	3/19/10	14:35	50	East	Broadside	Other Motor Vehicle	West	Proceeding Straight	West	Changing Lanes	Unsafe Lane Change	0	0
5250919	2/6/11	14:11	12	South	Sideswipe	Other Motor Vehicle	North	Making Right Turn	North	Making Right Turn	Unsafe Starting or Backing	0	0
5155326	4/9/11	11:25	0	In Int.	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Stopped in Road	Unsafe Speed	0	0
5309465	8/15/11	16:43	0	In Int.	Vehicle - Pedestrian	Pedestrian	East	Proceeding Straight	North	Proceeding Straight	Improper Passing	1	0
6083646	4/30/13	20:20	0	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	East	Proceeding Straight	Auto R/W Violation	1	0
6141224	6/12/13	15:49	35	East	Rear-End	Other Motor Vehicle	West	Slowing/Stopping	West	Stopped in Road	Unsafe Speed	0	0
6140290	6/25/13	8:56	0	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	West	Proceeding Straight	Auto R/W Violation	2	0

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Traffic Collision History Report

Location: University Ave / Jefferson Ave
 Date Range Reported: 7/1/2008 - 6/30/2013
 Total Number of Collisions: 1

Report No.	Date	Time	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Direct. of Travel 1	Movement Prec. Coll. 1	Direct. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil
5151910	3/4/11	14:18	0	In Int.	Vehicle - Pedestrian	Pedestrian	North	Making Left Turn	South	Proceeding Straight	Other	1	0

Total Number of Collisions: 1

Settings Used For Query

<u>Parameter</u>	<u>Setting</u>
Street Name	UNIVERSITY AVE
Cross Street	JEFFERSON AVE
Starting Date	7/1/2008
Ending Date	6/30/2013
Intersection	Intersection Related

