

APPLICATION FOR
CYCLE 7 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)

APPLICATION SUMMARY

This summary page is filled out automatically once the application is completed.

After the application is finalized, please save this PDF form using the exact "Application ID" (shown below) as the file name.

Important: Review and follow [the Application Instructions](#) step-by-step as you complete the application. Completing an application without referencing to the instructions will likely in an incomplete application or an application with fatal flaws that will be disqualified from the ranking and selection process.

Application ID: 04-Oakland-1

Submitted By (Agency):
Oakland

Caltrans District	Application Number	Out of
04	1	4

Project Location

Telegraph Avenue corridor between 29th Street and 45th Street

Project Description

Stripe and sign road diet with buffered bike lanes between 29th and 41st Sts; install signal modifications at 29th and 45th Sts; install uncontrolled crosswalk enhancements, such as ladder striping, painted bulb-outs, and painted median refuges.

Countermeasure 1:	R15: Road Diet (Reduce travel lanes from 4 to 3 and add a two way left-turn and bike lane)		
Countermeasure 2:	NS18: Install pedestrian crossing at uncontrolled locations (with enhanced safety features / curb-extensions)		
Countermeasure 3:			
Total Expected Benefit	22,633,423	Total Project Cost	\$1,493,900.00

B/C Ratio: 15.15

I. Basic Project Information

Date Caltrans District MPO

Agency County

Total number of applications being submitted by your agency

Application Number (each application must have a unique number)

Contact Person Information

Name (Last, First):

Position/Title of Contact Person

Email: Telephone: Extension:

Address:

City: Zip Code: (Enter only a 5-digit number.)

Project Information

Project Location
-Be Brief (limited to 250 characters)
[-See Instructions](#)

Project Description
-Be Brief (limited to 250 characters)
[-See Instructions](#)

Functional Classification (For Functional Classification and CRS Maps, Visit http://www.dot.ca.gov/hq/tsip/hseb/crs_maps/)

CRS Map ID (e.g. 08E14)

Urban/Rural Area (Visit <http://earth.dot.ca.gov/>)

High-Risk-Rural-Roads (HR3) Eligibility

If this project is not HR3 eligible, what is the approximate total cost percentage that is HR3 eligible? %

Work on the State Highway System

Does the project include improvements on the State Highway System?

If no, move on to the next page; If yes, go to the below question.

Is this a joint-funded project with Caltrans?

- ☐ If yes, check this box to confirm a formal Letter of Support from Caltrans - District Traffic is attached to the application. The letter should include estimates of cost sharing.
- ☐ If no, check this box to confirm a written correspondence from Caltrans District Traffic is attached to the application. The correspondence should indicate that Caltrans does not see issues that would prevent the proposed project from receiving an encroachment permit

Non-Infrastructure (NI) ElementsDoes the project include NI Elements?

If yes, NI Activity Worksheet and NI Cost Estimate are required attachments. For more information on the requirements and guidance for NI elements of HSIP applications, see the [HSIP NI webpage](#).

What are the primary type(s) of non-infrastructure included? (Check all that apply. Skip if project does not include NI Elements.)

☐ Bicycle and pedestrian safety education (K-12 students)☐ Enforcement (school zones)☐ Bicycle and pedestrian safety education (adults)☐ Other Enforcement (please describe below)☐ Other safety education (please describe below)☐ Emergency Medical System**Additional Information**1. Is the project focused primarily on "spot location(s)" or "systemic" improvements? The primary type of the "systemic" improvements:

2. Which of the California's Strategic Highway Safety Plan (SHSP) Challenge Areas does the project address primarily?
(For more information on the SHSP and its Challenge Areas, see: <http://www.dot.ca.gov/SHSP/>)

3. How were the safety needs and potential countermeasures for this project **first** identified?

4. What is the primarily mode of travel intended to be benefited by this project?

5. Approximate percentage of project cost going to improvements related to **motorized** travel %6. Approximate percentage of project cost going to improvements related to **non-motorized** travel %

7. Is the project focused primarily on "Intersection" or "Roadway" improvement?

Miles of Roadway 8. Posted Speed Limit (mph)

Average Daily Traffic	ADT (Major Road)	ADT (Minor Road)	Year Collected
(See Instructions)	7,518		2013

II. Narrative Questions [\(See Instructions\)](#)

These narrative questions are intended to provide additional project details for the application reviewers and project files. Application reviewers will use the information in their “fatal flaw” assessment of the applications, including:

- 1) The project scope is eligible for HSIP funding;
- 2) The countermeasures used in the B/C ratio calculation are appropriately applied based on the scope of the project;
- 3) The crash data used in the B/C ratio calculation is appropriately applied based on the scope of the project and countermeasures used;
- 4) The costs included in the application represent the likely total project cost necessary to fully construct the proposed scope. If the proposed project is a piece of a larger construction project, the entire scope of the larger project must be identified and included in the B/C ratio calculation;
- 5) The application data and attachments are reasonable and meet generally accepted traffic engineering and transportation safety principles.

If significant inconsistencies or errors are found in the application information, the Caltrans reviewers may conclude that the application includes one or more “fatal flaws” and the application will be dropped from further funding considerations. The applicant will not be notified of Caltrans findings until after the selection process is complete.

1. Overall Identification of Need

Describe how the agency identified the project as one of its top safety priorities. Was a data-driven, safety evaluation of their entire roadway network completed? Do the proposed project locations represent some of the agency's highest crash concentrations?
(limited to 5,000 characters)

This project addresses the bicycle and pedestrian safety concerns on Telegraph Avenue. Telegraph Avenue is an important north-south four-lane arterial connecting Berkeley and north Oakland to downtown Oakland. The corridor is also an important facility for bicyclists and pedestrians, serving neighborhoods and districts in the area, and yet is not designed well for these users. Even in absence of an existing designated bicycle facility in the study corridor, on average 1,200 cyclists travel along Telegraph Avenue on weekdays, nearly twice as high as parallel routes despite the higher vehicle volumes. Pedestrians face sub-optimal crossing conditions, with over 400 feet crossing distance between crosswalks, and an observed driver yield rate between 20-38 percent at unsignalized crossing (2014 Telegraph Complete Streets Plan).

The Telegraph Avenue Complete Streets Safety Project originated from the existing conditions analysis completed under the Telegraph Avenue Complete Streets Plan, which was adopted in 2014. Through the Plan, bicycle collisions between 2007 and 2011 were determine to be some of the highest frequency citywide. The Plan analyzed crash data from 2007 to 2011 between 20th Street and Alcatraz Avenue, and it was established that the most common collision on Telegraph Avenue involved motorists colliding with other motorists, with 138 reported collisions, followed by 66 motorist-bicyclist collisions and 68 motorist-pedestrian collisions. All of the bicyclist and pedestrian related collisions resulted in injuries. Collisions resulted primarily from drivers speeding, failing to yield and/or signal when making turns, failing to yield to bicyclists when opening car doors (“dooring”) and when turning, and failing to yield to pedestrians in crosswalks. Collisions were dispersed throughout the corridor, suggesting that corridor-wide solutions should be provided. Speed data collected on the corridor (2014) indicate that drives traveled up to 10 MPH over the speed limit across the corridor, increasing the risk of fatal and sever injury collision over the 25MPH posted speed limit.

Subsequently, the City commissioned a Preliminary Safety Assessment Study in Summer 2015 to determine if the collisions and proposed countermeasures would be appropriate for an HSIP application. Two engineering consulting firms were hired to assess collision patterns citywide to identify countermeasures and safety projects that would best address the observed collision patterns in the last five years. Through the Assessment and the Plan, the City proposed crosswalk improvements and road diet with buffered bike lanes per the Plan. 41st to 45th Streets were identified for inclusion in the HSIP application, despite the Plan did not finalize the design, as these are critical intersections for pedestrian safety at both the 45th Street signal and at the uncontrolled crosswalks at 44th and 41st Streets. The City’s 2015 Assessment also determined that there was a pattern of left-turn conflicts at the 29th Street / Telegraph Avenue intersection which could be addressed through protected left-turn phasing, which was incorporated into the project.

2. Potential for Proposed Improvements to Address the Safety Issue

Describe the primary causes of the collisions that have occurred within the project limits. Are there patterns in the crash types? Clearly demonstrate the connection between the problem and the proposed countermeasures utilized in the Benefit/Cost Ratio calculations. Depending on the nature of the project, explain why the agency choose to pursue "Spot location(s)" or Systemic" improvements. If the proposed project include Non-Infrastructure (NI) elements, also describe how the NI elements will complement in improving the safety within the project limits. (limited to 5,000 characters)

Note: Safety improvements that do not have countermeasures and crash reduction factors identified in the TIMS B/C Calculator can be included in the project scope and cost estimate as "Other Safety-Related" improvement; they just won't be added to the project's B/C ratio shown in the application.

Reviewing the road diet and pedestrian crossing collision data between (108 for road diet, 28 for crossings) 2006 and 2014 yielded three clear trends in collision type and frequency for the Telegraph Avenue corridor: pedestrian-auto collisions (about 25%), bicycle-auto collisions (another 25%), and rear-end vehicle collisions (about 25%). These collision types and frequency are common for a four-lane roadway. Unsafe speeds documented in the 2012 speed survey were corroborated in the reported collisions, with almost 17% of collisions due to speeding. A third of all pedestrian collisions violated the pedestrian's right-of-way, consistent with the low observed driver yield rates on the corridor, including a pedestrian fatality at the long uncontrolled crosswalk at 44th Street. Observations at the marked, unsignalized crosswalk located at Telegraph Avenue/24th Street indicated that pedestrians waited for an average of almost 5 vehicles to pass prior to starting to cross the street (i.e., only 2 out of 9 drivers yield to pedestrians at marked, unsignalized crosswalks). Moreover, because Telegraph Avenue has two through lanes in each direction, pedestrians are at risk of "multiple-threat" crashes, where a motorist in the outside lane yields to a pedestrian but the motorist in the inside lane does not due to masked visibility. As a result, a Systemic Approach to bicycle safety through a road diet with buffered bike lanes and pedestrian safety through a road diet and consistent, corridor-wide crosswalk enhancements is proposed.

Countermeasure 1 is R15: Road Diet (reduce travel lanes from 4 to 3 and add a two way left-turn and bike lanes). Note that Robert Peterson, Caltrans Safety Program Manager approved the use of this countermeasure, as there are existing left-turn pockets in some locations. This countermeasure includes all bicycle, pedestrian, and auto collisions between striping limits: 29th and 41st Streets, consistent with the Complete Streets Plan. The repurposed travel width would be allocated to buffered bicycle lanes and a two-way left-turn lane, as shown on Attachments 4 & 5. The countermeasure would provide a designated bike lane for the high volume of cyclists, over 1,200 average daily bicyclists (2013). This would address sideswipes and dooring collisions associated with bicycle-related collisions.

Countermeasure 2 is NS18: Install pedestrian crossing at uncontrolled locations (with enhanced safety features). This includes striping high-visibility ladder crosswalk with a consistent 300-400' spacing throughout the corridor to address pedestrian desire lines and connectivity, as show on Exhibit 4. These also include painted median refuges and curb extensions, as low cost solutions, and this will be supported by CM1 road diet, which will remove the risk of multiple-threat collisions. Between 41st and 45th Streets where the road diet does not extend, RRFBs are also proposed at 41st and 44th Streets to enhance the multi-lane crosswalks. Between 2006-2014, 28 pedestrian collisions occurred at or within 50' of an unsignalized intersection on Telegraph Avenue. Of those, almost all occurred at a legal crosswalk (marked or unmarked).

Other Safety Measures: In addition the two countermeasures described above, the 2015 Preliminary Safety Assessment determined the protected left-turning phasing at the Telegraph Avenue / 29th Street intersection would address pedestrian safety at this off-set intersection. Two severe pedestrian injury collisions occurred as result of westbound and eastbound left-turning vehicles, respectively, at the Telegraph Avenue / 29th Street intersection. Two "complaint of pain collisions" occurred between through bicyclists on Telegraph Avenue and opposing left-turning autos, which can also be corrected with protected left-turns. This countermeasure would protect the left-turn movements and remove their conflict from the pedestrian crossing phase. This was not included as third countermeasure (S6 Provide Protected left-turn phase where left-turn lane already exists), as the countermeasure did amount to 15% of the total project cost.

3. Crash Data Evaluation

Explain how the influence areas for each separate countermeasure were established. Describe how the limits of the crash data were established for each countermeasure to ensure only appropriate crashes were included in the Collision Summary Report(s), Collision Diagram(s) and B/C calculations. (limited to 5,000 characters)

The 2014 Telegraph Avenue Complete Streets Plan and the 2015 Preliminary Safety Analysis determined the project extents.

CM1 Road Diet with Bike Lanes: As shown on Attachment 7, the Influence Area is restricted to collisions that occurred on Telegraph Avenue between 29th Street and 41st Street, which are the extents of the road diet. Per the Local Roadway Safety Manual, all crashes occurring within the limits of the new lane striping are allowable. However, the large number of collisions that occurred at the MacArthur Boulevard/Telegraph Avenue intersection was not included, as the City recently modified the existing signal to include protected turn phasing and the City anticipates striping a road diet with Class II bicycle lanes on MacArthur Boulevard.

CM2 Uncontrolled Crosswalk Enhancements: As shown on Attachment 7, all of the pedestrian-auto collisions attributed to this measure and included in the B/C ratio occurred at existing uncontrolled marked crosswalks or within 50 feet of a crosswalk. To be conservative, 50 feet was determined to be the maximum reasonable distance that pedestrian crossing collisions could be attributed to marked crosswalk enhancements. This collision type occurring between 29th Street and 45th Street and were included, as uncontrolled crosswalk enhancements are proposed along the entire length of the corridor.

4. Prior attempts to address the Safety Issue

If appropriate, list all other projects/countermeasures that have been (or are being) deployed at this location. Applicants must identify all prior federal HSIP, HR3 or Safe Routes To School (SRTS) funds approved within or directly adjacent to the propose projects limits within the last 10 years. (HSIP funding cannot be used to construct the same general type of countermeasures within the same limits within 10 years to ensure agencies do not apply the same Crash Reduction Factors to the same crashes.)

If the agency is proposing to construct follow-up improvements along a corridor or at a location that has already had a safety project funded, the applicant must ensure the combines CRF applied to the crashes by both projects is not greater than 80% (See the applications instructions relating to Crash Data for more detail).

For projects proposing high cost spot location projects/countermeasures, applicants must document that they have installed and monitored low-cost improvements which have not been adequately addressing the safety issue.

(limited to 5,000 characters)

Oakland made a significant planning investment in safety analysis through the 2014 Telegraph Avenue Complete Streets Plan. In addition to that, the City has a planned repaving project for Telegraph Avenue between 20th and 29th Streets to include Class IV cycle tracks and pedestrian crossing improvements similar to those proposed in the HSIP Project which starts at 29th Street. The HSIP Project, because it begins at 29th Street, would create a continuous corridor of pedestrian safety improvements and a dedicated bikeway between the area around the MacArthur BART Station and 19th Street BART Station, and represents 1.5 miles of complete streets safety improvements. Additionally, Oakland has invested in complete streets safety improvements at the Telegraph Avenue/Broadway intersection. Construction is currently underway to improve the intersection alignment, and, as such, this was not included in the analysis.

5. Total project costs

Describe the process used to establish the total cost for the project. Confirm contingencies for reasonably expected costs, including drainage, environmental, traffic, etc, are included. All PE, CE and other project delivery costs must be included, even if federal funding will not be utilized in the phase of the project. For a large project where the HSIP funding is only a small portion of the overall project scope and costs, the total project cost must still be included in the application and its B/C ratio calculation.

(limited to 5,000 characters)

The City retained an engineering consultant in 2015 to prepare conceptual design drawings of the countermeasures and other safety improvements based on the results of the City's 2015 Preliminary Safety Assessment. As part of this, cost estimates were prepared corresponding to the preliminary layouts. Cost estimates reflect the latest information regarding construction bid documents in Oakland and Caltrans District 4. Contingencies for drainage, environmental, and traffic control are included in the cost estimates. Attachment 4 presents preliminary layout showing existing and proposed conditions, and Attachment 10 presents the corresponding Detailed Engineers Estimate.

III. Project Cost Estimate [\(See Instructions\)](#)

All project costs must be accounted for on this form, even if substantial elements of the overall project are to be funded by other sources. **(For federal funds to be 100% reimbursable, all countermeasures selected must be 100% eligible)**

Do not enter in shaded fields (calculated - read only). Round all costs up to the nearest hundred dollars. Once all costs and the desired HSIP/Total ratios are entered, click "Check Cost Estimate" to perform validation. If errors are detected, they will appear below the button. **Click it to check again each time when the costs have been revised.**

Phase		Total Cost	HSIP/Total (%)	HSIP Funds	Local/Other Funds
Preliminary Engineering	Environmental	\$55,400	90 (%)	\$49,860	\$5,540
	PS&E	\$166,000	90 (%)	\$149,400	\$16,600
	PE Subtotal	\$221,400		\$199,260	\$22,140
	☐ Agency does NOT request HSIP funds for PE Phase (automatically checked if PE - HSIP funds is \$0).				
Right of Way	Right of Way Engineering	\$0	0 (%)	\$0	\$0
	Appraisals, Acquisitions & Utilities	\$0	0 (%)	\$0	\$0
	ROW Subtotal	\$0		\$0	\$0
Construction Engineering & Construction	Construction Engineering	\$165,900	90 (%)	\$149,310	\$16,590
	Construction	\$1,106,600	90 (%)	\$995,940	\$110,660
	CON Subtotal	\$1,272,500		\$1,145,250	\$127,250
Non - Infrastructure (NI)	NI Elements	\$0	0 (%)	\$0	\$0
Total Cost		\$1,493,900	90 (%)	\$1,344,510	\$149,390

Click to Check Cost Estimate (See Notes in Instructions)

No errors have been found in the cost estimate.

IV. Implementation Schedule [\(See Instructions\)](#)

The local agency is expected to deliver the project per Caltrans Local Assistance [safety program delivery requirements](#). In order for the milestones to be calculated correctly, all fields needs to be filled in. For steps that are not applicable, enter "0".

Target Date for the Project's Amendment into the FTIP:

01/01/2016

Time for agency to internally staff project and request PE authorization

3

Month(s)

Typical Time for Caltrans and FHWA to process and approve PE authorization

2

Month(s)

Proposed PE Authorization Date:

06/01/2016

 (PE Authorization
Delivery Milestone)

Will external consultants be required to complete the PE phase of this project?

Yes

Additional time needed to the Delivery Process for hiring PE consultant(s)

6

Month(s) (0 - 6)

Time to prepare environmental studies request

3

Month(s)

Time to complete CEQA/NEPA studies/approvals

3

Month(s)

See PES Form in the LAPM for Typical studies and permits

Time to complete the Right of Way Acquisition (federal process)

0

Month(s)

Plan on 18 months minimum for federal process including a condemnation

Time to complete final PS&E documentation

14

Month(s)

Other

0

Month(s)

Expected Completion Date for the PE Phase:

07/31/2018

Time for agency to request CON authorization

4

Month(s)

Typical Time for Caltrans and FHWA to process and approve CON Auth

3

Month(s)

Proposed CON Authorization Date:

02/28/2019

 (CON Authorization
Delivery Milestone)

Time included for the agency's workload-leveling or construction-window needs

1

Month(s)

Time to award contract with CON contractor (following the federal process, including Board/Council approval, advertise, award, execute and mobilize)

6

Month(s)

Time to complete construction

8

Month(s)

Time included for closing the CON contract

2

Month(s)

Other

0

Month(s)

Expected Completion Date for the CON Phase:

07/29/2020

Time to complete the project close-out process

2

Month(s)

Typical Time for Caltrans and FHWA to process and approve project close-out

3

Month(s)

Expected Completion Date for the project Close-Out:

12/28/2020

 (Close-Out
Delivery Milestone)

V. Countermeasures, Crash Data and Benefit/Cost Ratio [\(See Instructions\)](#)

In the process of completing this application, the Local Agency is required to utilize the Benefit/Cost Ratio Calculation Tool that is included in the Safe Transportation research and Education Center (SafeTREC) Transportation Injury Mapping System (TIMS) web site. This **web site** can be assessed at <http://tims.berkeley.edu/>

The final output summary page from TIMS must be included as part of the official application (both electronically and hard copy). The hard copy page must be included in the application as one of the attachments.

In order to facilitate the electronic collection and tracking of this data, Caltrans is requiring agencies to manually enter some of the key "input data" and "output data" used in their final TIMS B/C Ratio. *NOTE: If any of the values inputted on this sheet do not match the values from the TIMS B/C Ratio Output Summary sheet, THE APPLICATION WILL BE REJECTED. **Be careful and confirm the numbers!***

TIMS Application ID: (This ID is generated by this form.
TIMS Application ID must match this ID.)

Version (from TIMS) : **Crash Data Period:** from to

Total Project Cost: (This must match the total project cost in Section III.)

Countermeasure Information

Number of countermeasures utilized:

Countermeasure

#1:	R15: Road Diet (Reduce travel lanes from 4 to 3 and add a two way left-turn and bike lane)	CRF:	30
#2:	NS18: Install pedestrian crossing at uncontrolled locations (with enhanced safety features / curb-exten	CRF:	35
#3:		CRF:	
Combined CRF:			65

B/C Ratio Calculation

	Expected Benefit (Life)	Expected Cost	Resulting B/C
Countermeasure #1	\$14,719,696	\$759,610	19.38
Countermeasure #2	\$7,913,727	\$734,290	10.78
Countermeasure #3			0.00
Project's Total (Overall)	\$22,633,423	\$1,493,900	15.15

VI. Application Attachments [\(See Instructions\)](#)

Check all attachments included in this application.

- ☒ Engineer's Checklist (Required)
- ☒ Vicinity map /Location map (Required)
- ☒ Project maps/plans showing existing and proposed conditions (Required)
- ☒ Pictures of Existing Condition (Required)
- ☒ Collision diagram(s) (Required)
- ☒ Collision List (Required)
- ☒ Collision Summary (Required)
- ☒ Detailed Engineer's Estimate (Required)
- ☒ TIMS B/C output summary sheet (Required)
- ☐ Warrant studies (Required when applicable)
- ☐ Letter/email of Support from Caltrans (Required when applicable)
- ☐ Non-Infrastructure (NI) Activity Worksheet and NI Cost Estimate (Required when applicable)
- ☒ Additional narration, documentation, letters of support, etc. (optional)

Application Data Checklist and Engineer's Stamp

This application checklist is to be used by the engineer in "responsible charge" of the preparation of this HSIP application to ensure all of the primary elements of the application are included and the application is free of errors in the calculation of the Benefit-to-Cost Ratio (B/C); allowing the application to be accurately ranked in the statewide selection process. Applications with errors in the supporting data for the B/C calculation will not be considered in the application process.

Special Considerations for Engineers before they Sign and Stamp this document attesting to the accuracy of the application:

Chapter 7; Article 3; Section 6735 of the Professional Engineer's Act of the State of California requires engineering calculation(s) or report(s) be either prepared by or under the responsible charge of a licensed civil engineer. Since the corresponding HSIP application defines the scope of work of a future civil construction project and requires complex engineering principles and calculations which are based on the best data available at the time of the application, the application must be signed and stamped by a licensed civil engineer. By signing and stamping this document, the engineer is attesting to this application's technical information and engineering data upon which local agency's recommendations, conclusions, and decisions are made. This action is governed by the Professional Engineer's Act and the corresponding Code of Professional Conduct, under Sections 6775 and 6735.

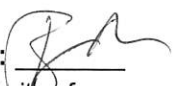
The following checklist is to be completed by the engineer in "responsible charge" based on the final application and application attachments – as submitted to Caltrans. The engineer's initials and stamp should not be placed until the application is complete and in final form.

1. Vicinity map /Location map

Engineer's Initials: 

- a. The project limits must be clearly depicted in relationship to the overall agency boundary

2. Project layout-plan showing existing and proposed conditions must:

Engineer's Initials: 

- a. Be to a scale which allows the visual verification of the overall project limits and the "construction" limits of each safety countermeasure included in the application's B/C ratio
- b. Show the full scope of the proposed project, including any non-safety construction items
- c. Show the "Influence Area" for each safety countermeasure (CM) included in the application's B/C ratio
- d. Show all changes to existing lane and shoulder widths. Label the proposed widths
- e. Show limits of all roadway excavation/demolition
- f. Show agency's right of way (ROW) lines. (Also show Caltrans', Railroad, and all other government agencies)

3. Project cross-section showing existing and proposed conditions.

Engineer's Initials: 

(Only required for projects with roadway excavation, cut/fill slopes, and changes to lane widths)

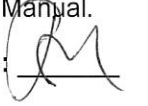
- a. Show and dimension: changes, ROW lines, safety countermeasures, etc.

4. Countermeasure Selection (used throughout the application):

Engineer's Initials: 

- a. The CMs used are appropriate and reasonable based specifically on the guidance in the HSIP call-for-projects guidelines and application instructions, including Appendix B of the Local Roadway Safety Manual.

5. Crash Data used in the B/C calculations must be:

Engineer's Initials: 

- a. From a reliable and well documented source
- b. Within influence area of CM and applied to CMs using generally accepted traffic engineering principles
(Example: If the CM only addresses the northbound lanes of a divided roadway, then southbound crashes should be excluded.)
- c. Accurately shown in collision diagram(s) and collision lists(s) attached to this application.
- d. Crashes are presented in terms of the number of crashes (**not** the number of injuries and fatalities)
- e. The most recent crash data available and a minimum 5 years and maximum 10 years of data

6. Collision Diagram(s) (Shown separately or combined)

Engineer's Initials: 

- a. Should be to scale with crash locations accurately plotted
- b. Reveals collision pattern(s) necessary to justify CM(s)
- c. The influence area for each CM is shown separately on the diagrams (unless the areas are identical)
- d. All crashes, included in the B/C Calculation, must be clearly shown within the influence area of that CM
- e. Totals for each Location and/or CM are shown with crashes segregated based on Crash Severity
- f. The totals shown match the totals shown in the Collision List and Collision Summary

Form Date: 7/21/15

HSIP 7 Application Form

7. Collision List(s) (Shown separately or combined)

Engineer's Initials: RM

- Totals for each Location and/or CM are shown with crashes segregated based on Crash Severity
- If the List(s) includes crashes that were not appropriate to include in the project B/C calculations, these crashes must be crossed through or removed and not included in the totals
- The totals shown match the totals shown in the Collision Diagram and Collision Summary
- Each crash is only counted as one, even if there were multiple victims and/or vehicles involved

8. Collision Summary (HSIP Form)

Engineer's Initials: RM

- Totals for each Location/CM are shown with crashes segregated based on Crash Severity
- The totals for each Location/CM match the totals shown in the Collision Diagram and Collision List
- The totals for each CM at the bottom of the form match the totals in the TIMS B/C Output Summary

9. Detailed Engineer's Estimate (HSIP Form)

Engineer's Initials: RM

- All likely construction costs associated with the project are identified and included in the estimate
- Each of the main project elements are broken out into separate construction items. The costs for each item are based on calculated quantities and appropriate corresponding unit costs
- Costs for each item are distributed between CMs using a logical method to fairly calculate each CM's cost
- Each CM included in the B/C calculation must represent a minimum of 15% of the construction costs
- "Other Safety" and "Non-Safety" construction items/costs are identified and properly accounted for
- The total construction cost in the estimate must match the "Construction" cost in Section III of the application

10. TIMS B/C output summary sheet

Engineer's Initials: RM

- CMs and crash data shown match the totals shown in the Collision Summary form
- The total project cost in the B/C calculation must match the total project cost in Section III of the application
- The combined CRF applied to any single set of crashes is less than or equal to 0.8
- The sheet attached to the application must be signed by the Engineer in Responsible Charge

11. Warrant studies/guidance (Check if not applicable)

Engineer's Initials: RM

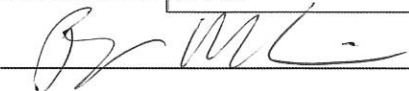
- ☐ N/A
 - Traffic Signal Warrants – Warrant 4, 5 or 7 met (CA MUTCD): Signal warrants must be documented as having been met based on the CA MUTCD.

12. Additional narration, documentation, letters of support:

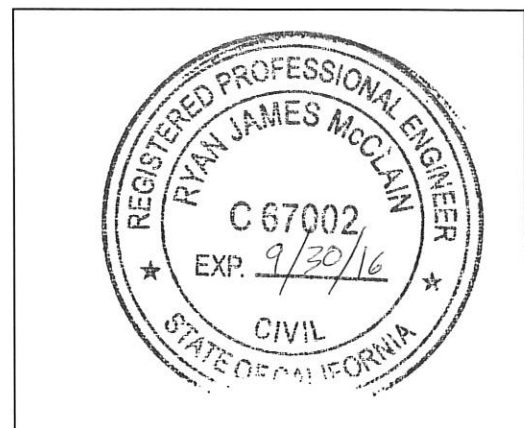
Engineer's Initials: RM

- The text in the "Narrative Questions" in the application is consistent with and supports the engineering logic and calculations used in the development of the application's B/C ratio
- When needed to clarify non-standard application of countermeasures, crashes and/or costs; appropriate documentation is attached to the application to document the engineering decisions and calculations

Licensed Engineer:

Name: Ryan McClain, PE
Title: Senior Associate, Fehr & Peers
Engineer License Number 67002
Signature: 
Date: July 31, 2015
Email: r.mcclain@fehrrandpeers.com
Phone: (925)930-7100

Engineer's Stamp:



To ensure the application's quality and the agency's commitment to deliver the safety project in an expedited manner, the application must be signed by the Agency's Transportation/Traffic Engineering Manager.

By signing this application, the manager is attesting to:

1. All data in the application is accurate and represents the total scope of the planned project;
2. The agency understands the Project Delivery Requirements for the HSIP Program and is prepared to deliver the project with these requirements; and
3. The agency understands if Caltrans staff determine that any of the above requirements are not met, or data is inaccurate, or the application fails to meet the program guidelines and application instructions, the application will be rejected and will not be eligible to receive federal safety funding. Due to time constraints in the evaluation process, applicants will not be notified until after the selection process is complete. Refer to Application Form Instructions for more information.

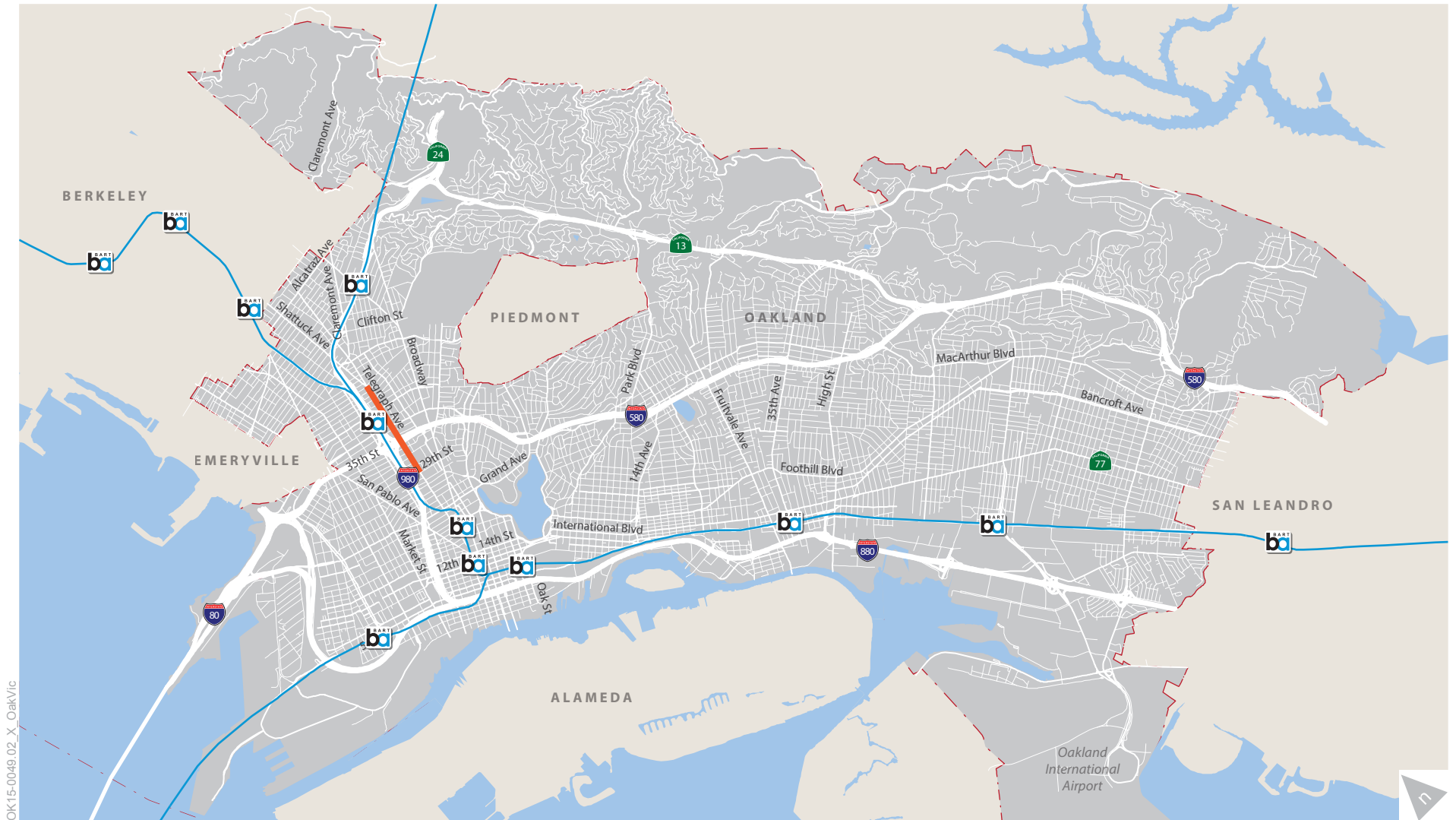
Transportation Manager:

Name:

Title:

Signature: 

Date:

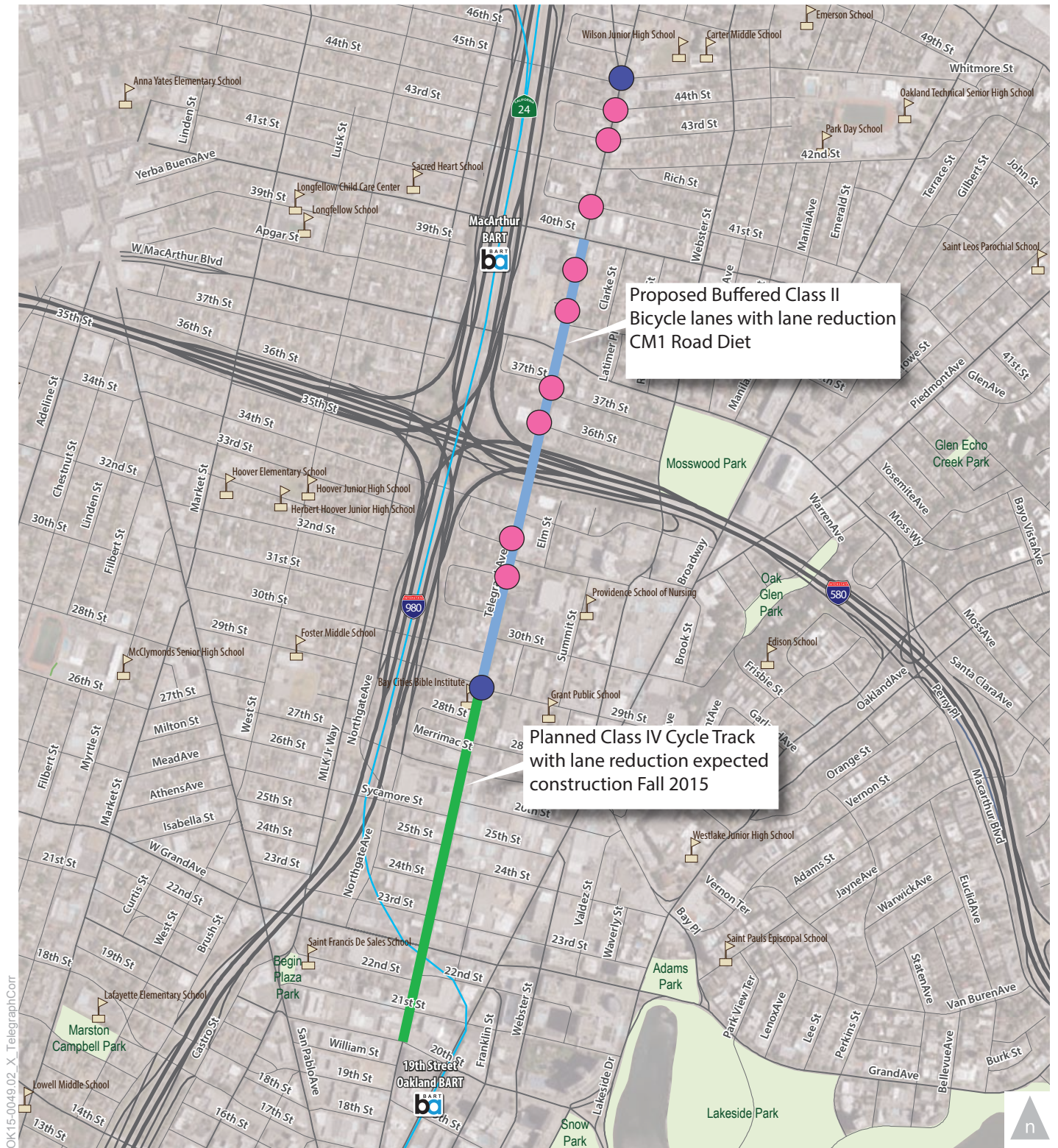


OK-15-0049.02_X_OakVic

LEGEND

— Telegraph Avenue from
29th Street to 45th Street





LEGEND



Proposed Pedestrian Crossing Improvements
CM2 Uncontrolled Crosswalk Enhancements

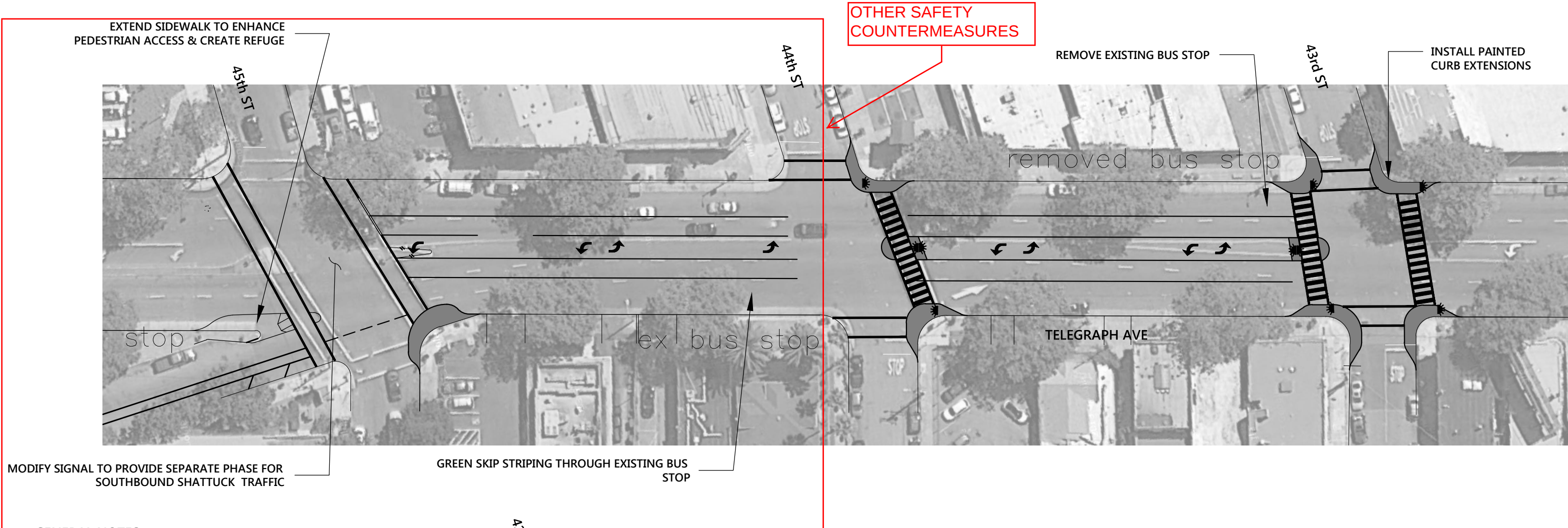


Protected Phasing Added as Other Safety Countermeasure



Overview of Proposed Telegraph Countermeasures

ATTACHMENT 3



GENERAL NOTES:

1. REMOVE ONE TRAVEL LANE IN EACH DIRECTION & REPLACE WITH TWO-WAY LEFT TURN LANE & CLASS II BICYCLE LANES WITH BUFFER BETWEEN 45TH STREET AND 29TH STREET.
2. STRIPE HIGH-VISIBILITY CROSSWALKS ACROSS TELEGRAPH AS NOTED. STRIPE CROSSWALKS (TYP.) ACROSS SIDE STREETS.



NOTE: EACH VIEWPORT REFLECTS CM2 UNCONTROLLED CROSSWALK ENHANCEMENTS



CM1 ROAD DIET ONLY APPLIES SOUTH OF 41ST STREET

NOTE: VIEWPORTS REFLECTS CM1 ROAD DIET AND CM2 UNCONTROLLED CROSSWALK ENHANCEMENTS INFLUENCE AREAS



GREEN SKIP STRIPING THROUGH EXISTING BUS STOP

RELOCATED BUS STOP, STRIPE GREEN SKIP STRIPING



GREEN SKIP STRIPING THROUGH EXISTING BUS STOP

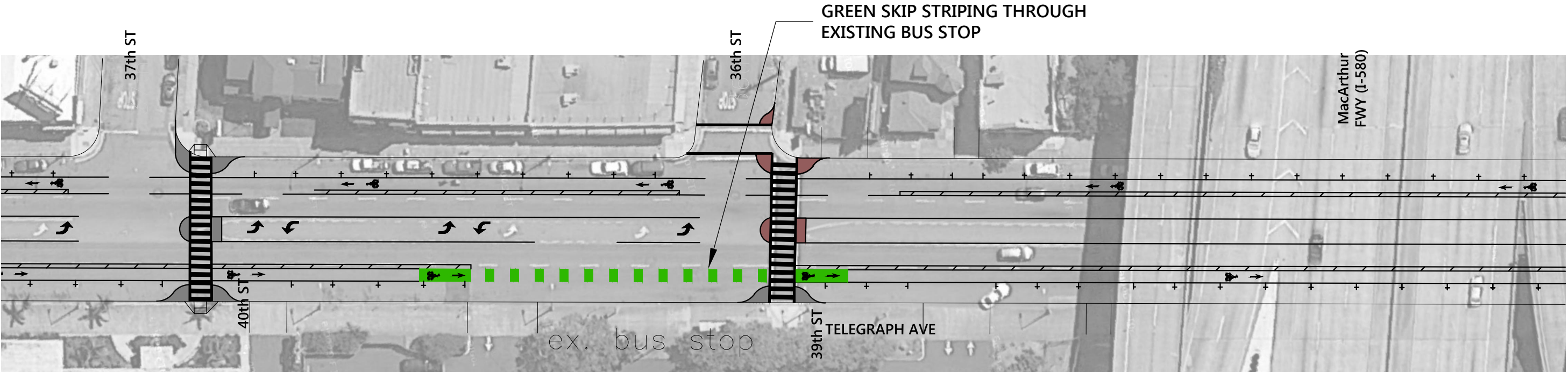
RELOCATED BUS STOP, STRIPE GREEN SKIP STRIPING

ATTACHMENT 4B
Telegraph Ave
between 41st & 37th Street



GENERAL NOTES:

- 1. REMOVE ONE TRAVEL LANE IN EACH DIRECTION & REPLACE WITH TWO-WAY LEFT TURN LANE & CLASS II BICYCLE LANES WITH BUFFER BETWEEN 45TH STREET AND 29TH STREET.
- 2. STRIPE HIGH-VISIBILITY CROSSWALKS ACROSS TELEGRAPH AS NOTED. STRIPE CROSSWALKS (TYP.) ACROSS SIDE STREETS.



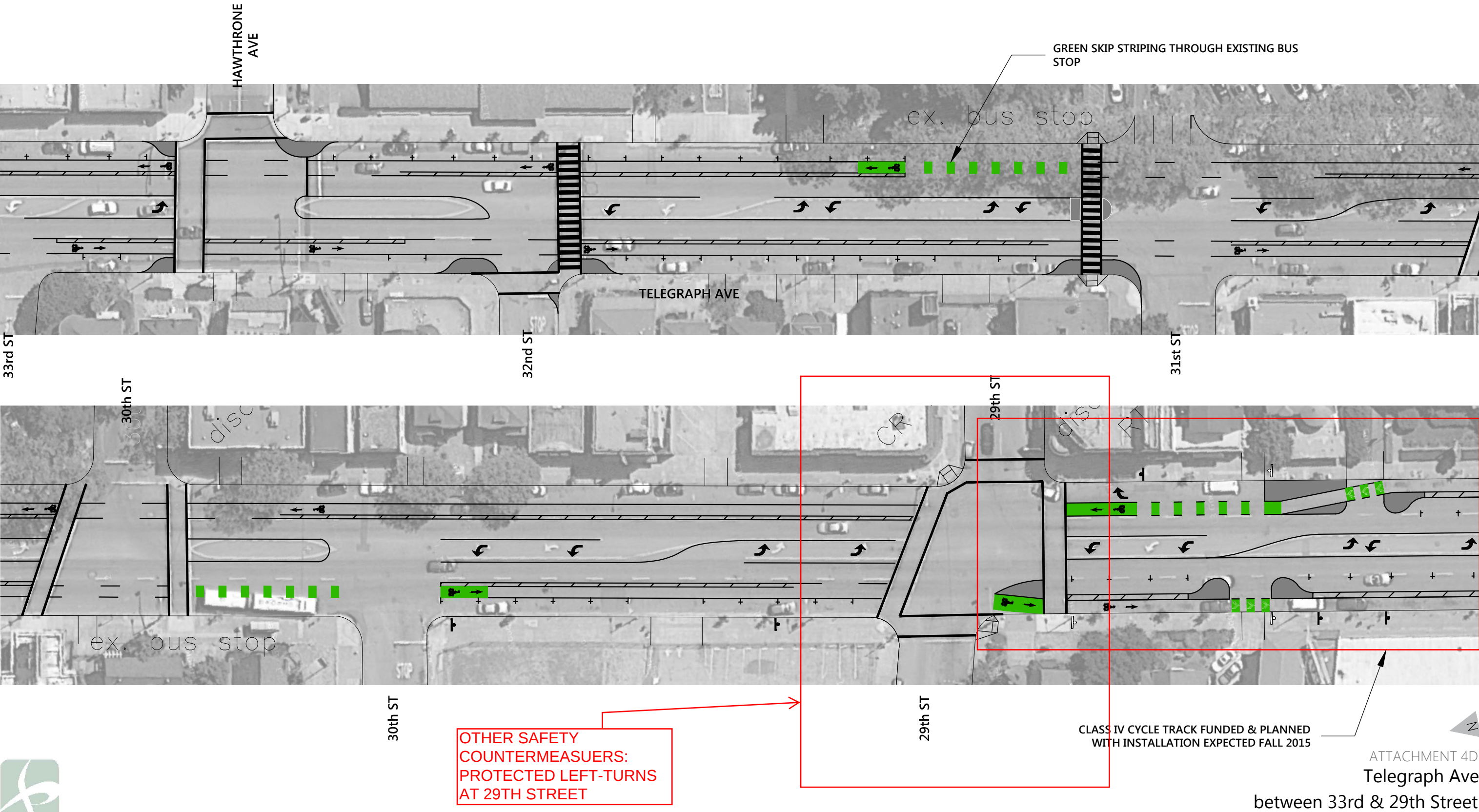
NOTE: VIEWPORTS REFLECTS CM1 ROAD DIET AND CM2 UNCONTROLLED CROSSWALK ENHANCEMENTS INFLUENCE AREAS



GENERAL NOTES:

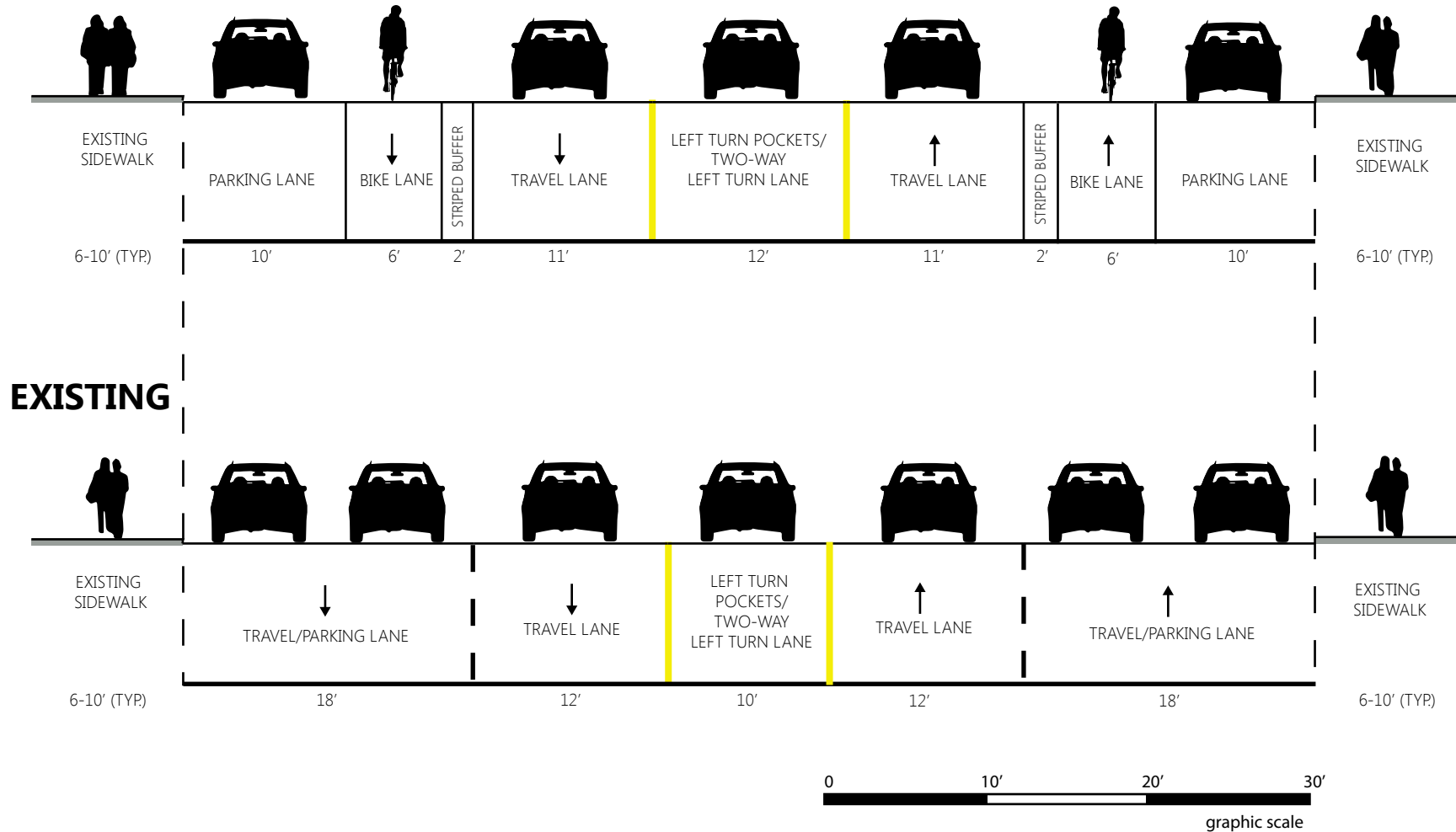
1.
1. REMOVE ONE TRAVEL LANE IN EACH DIRECTION & REPLACE WITH TWO-WAY LEFT TURN LANE & CLASS II BICYCLE LANES WITH BUFFER BETWEEN 45TH STREET AND 29TH STREET.
2.
2. STRIPE HIGH-VISIBILITY CROSSWALKS ACROSS TELEGRAPH AS NOTED. STRIPE CROSSWALKS (TYP.) ACROSS SIDE STREETS.

NOTE: VIEWPORTS REFLECTS CM1 ROAD DIET AND CM2 UNCONTROLLED CROSSWALK ENHANCEMENTS INFLUENCE AREAS



PROPOSED ROAD DIET IMPROVEMENTS

29th Street to 40th Street



TELEGRAPH AVENUE ROAD DIET PROPOSED CROSS-SECTION
ATTACHMENT 5

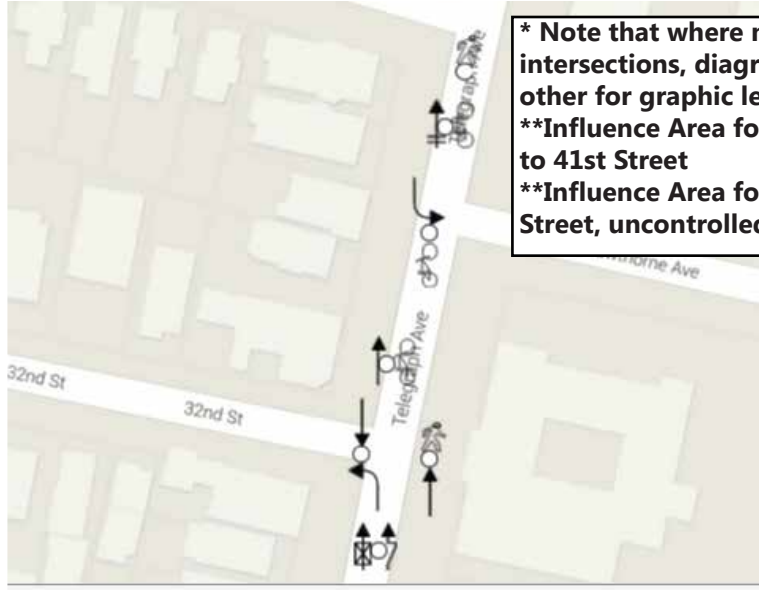


Existing long uncontrolled crosswalk at 41st



Existing long uncontrolled crosswalk at 44th

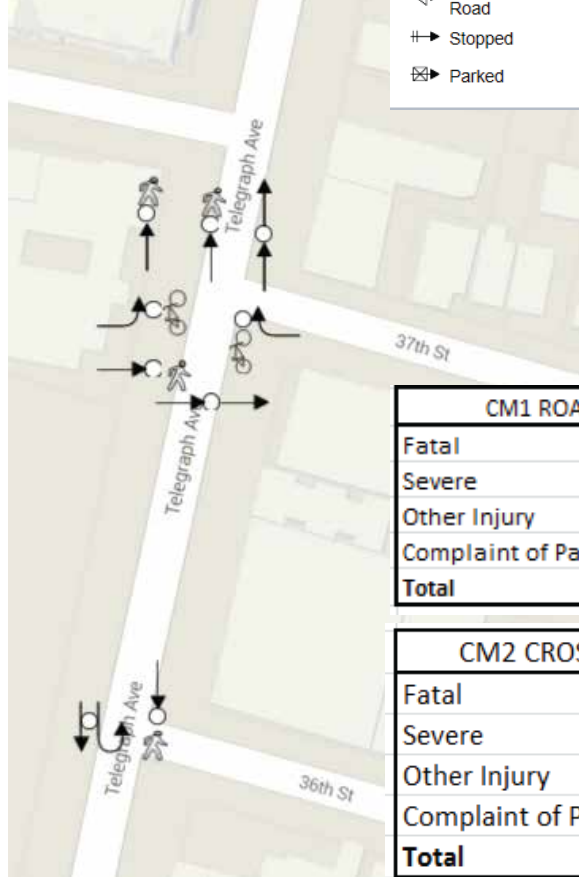




*** Note that where multiple collisions occurred at intersections, diagrams are shown offset from each other for graphic legibility**
****Influence Area for CM1 Road Diet is 29th Street to 41st Street**
****Influence Area for CM2 Crosswalk is 29th to 45 Street, uncontrolled location within 50' of crossings**

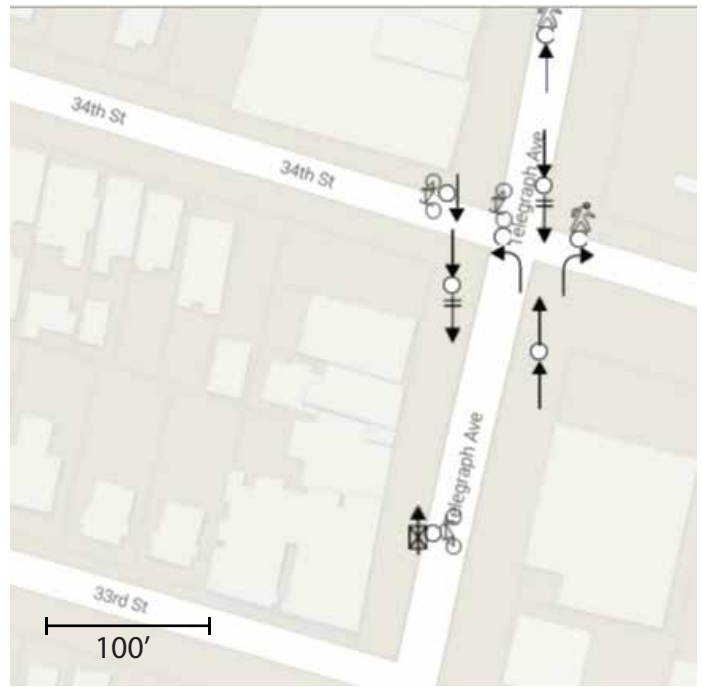
Legend

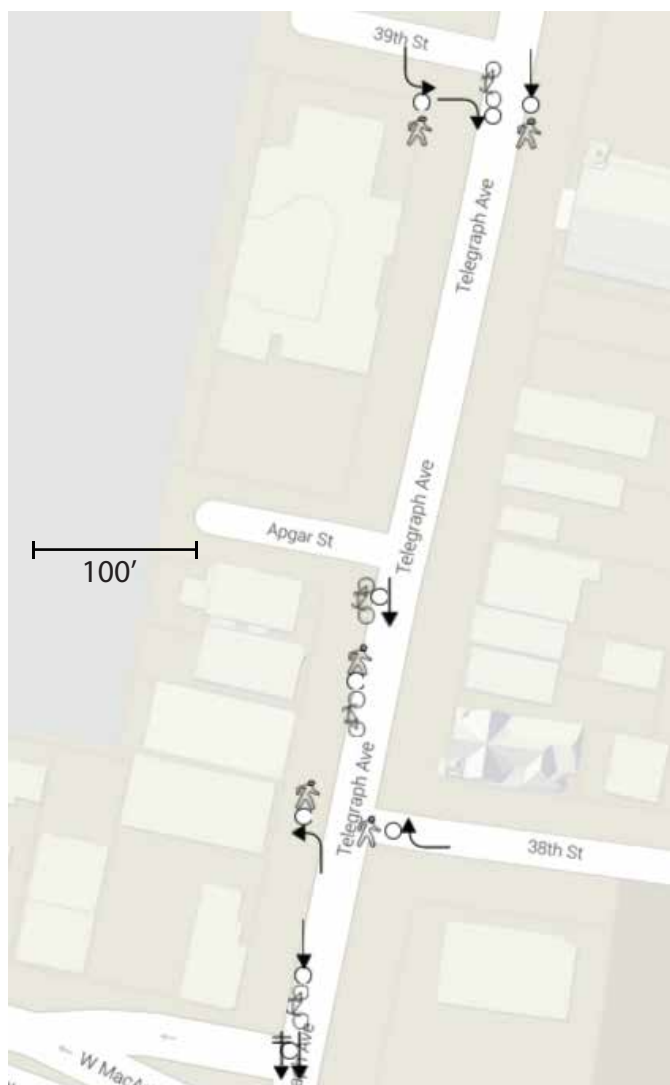
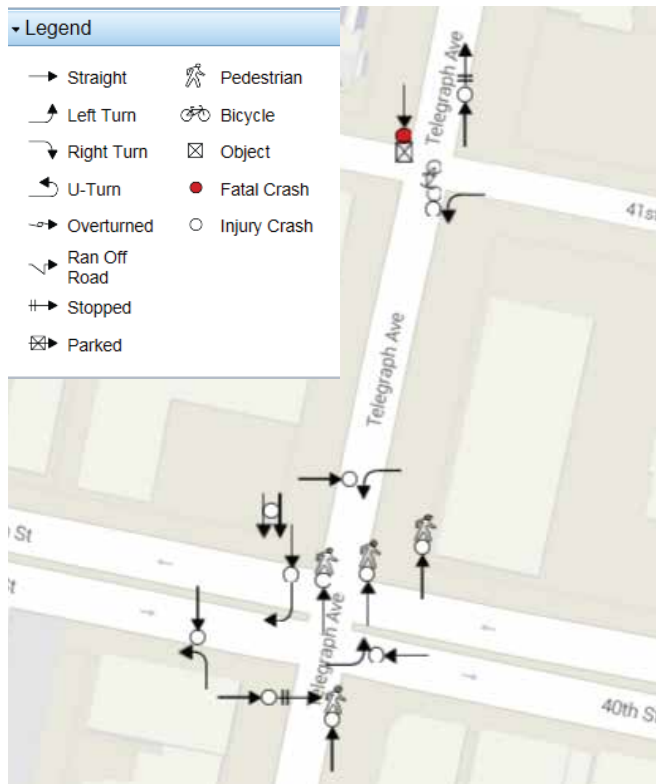
→ Straight	🚶 Pedestrian
↶ Left Turn	🚲 Bicycle
↷ Right Turn	☒ Object
↻ U-Turn	● Fatal Crash
↱ Overturned	○ Injury Crash
↘ Ran Off Road	
⊞ Stopped	
⊞ Parked	



CM1 ROAD DIET	
Fatal	3
Severe	5
Other Injury	21
Complaint of Pain	79
Total	108

CM2 CROSSWALKS	
Fatal	1
Severe	3
Other Injury	4
Complaint of Pain	20
Total	28

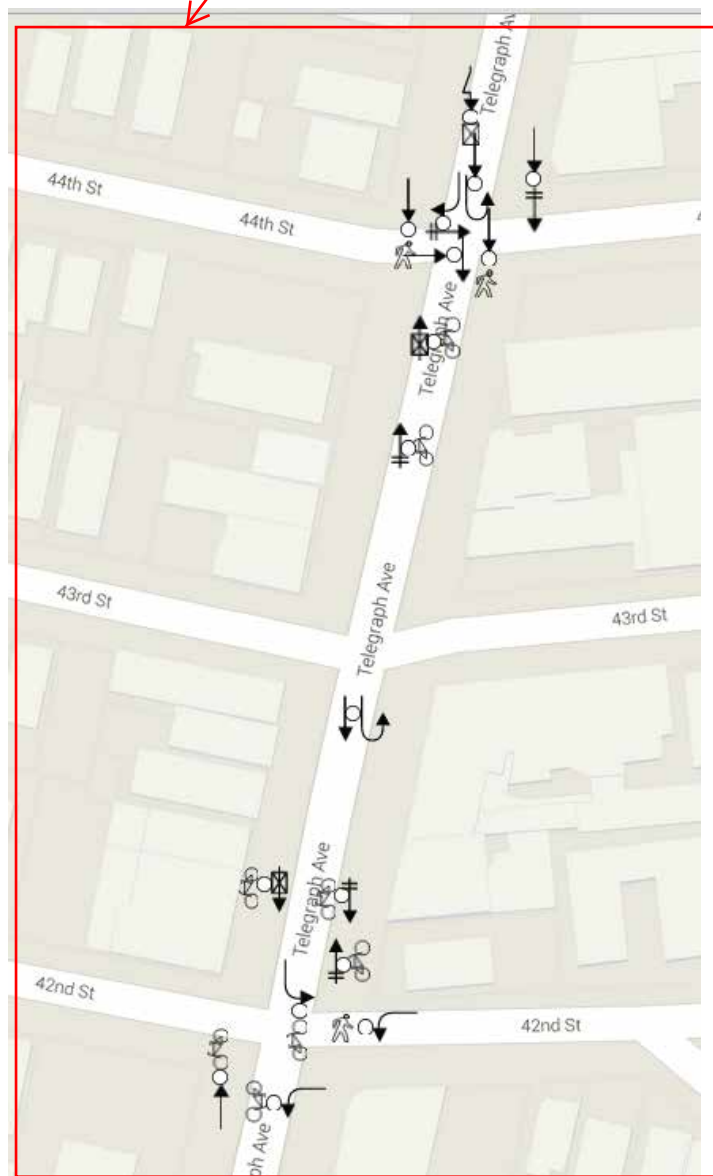




CM1 ROAD DIET	
Fatal	3
Severe	5
Other Injury	21
Complaint of Pain	80
Total	109

CM2 CROSSWALKS	
Fatal	1
Severe	3
Other Injury	4
Complaint of Pain	20
Total	28

CM2 Influence Area Only



Attachment 7b

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

CASEID	POINT_X	POINT_Y	YEAR_	LOCATION	CHPTYPE	DAYWEEK	CRASHSEV	VIOLCAT	KILLED	SEVINJ	OTHERINJ	COP
2885248	-122.2674531	37.81821	2006	109	0	4	3	9	0	0	1	0
3377913	-122.2674531	37.81821	2007	109	0	2	4	10	0	0	0	1
3881859	-122.2674531	37.81821	2008	109	0	1	4	3	0	0	0	6
4187789	-122.2673862	37.81847	2009	109	0	5	4	21	0	0	0	1
4874962	-122.2674531	37.81822	2010	109	0	3	4	9	0	0	0	1
4985677	-122.2674531	37.81822	2010	109	0	4	4	9	0	0	0	1
5276788	-122.26744	37.81821	2011	109	0	3	2	12	0	1	0	0
6414960	-122.26744	37.8182	2013	109	0	1	4	0	0	0	0	1
6313272	-122.26744	37.8182	2013	109	0	4	2	10	0	1	0	0
6520125	-122.2673834	37.8185	2014	109	0	2	4	3	0	0	0	1
2438557	-122.2672955	37.81882	2006	109	0	3	4	8	0	0	0	1
2523328	-122.2672431	37.81902	2006	109	0	5	4	3	0	0	0	2
3097344	-122.2672431	37.81902	2007	109	0	3	4	10	0	0	0	1
3359569	-122.2670904	37.81959	2007	109	0	4	4	0	0	0	0	1
4505302	-122.267278	37.81889	2009	109	0	5	4	3	0	0	0	1
3518529	-122.2669931	37.81997	2007	109	0	5	4	9	0	0	0	1
3964174	-122.2669557	37.8201	2008	109	0	4	4	8	0	0	0	1
4401891	-122.2670421	37.81976	2009	109	0	4	3	8	0	0	1	0
4489897	-122.26698	37.81996	2009	109	0	2	4	9	0	0	0	1
4551174	-122.26698	37.81996	2009	109	0	6	4	11	0	0	0	1
5083909	-122.26698	37.81996	2011	109	0	3	4	21	0	0	0	1
5169505	-122.2670608	37.8197	2011	109	0	7	3	11	0	0	1	0
5737866	-122.2669782	37.82002	2012	109	0	2	4	9	0	0	0	1
5780156	-122.26698	37.81996	2012	109	0	5	3	8	0	0	1	0
6436177	-122.2670421	37.8198	2013	109	0	1	3	8	0	0	1	0
2717874	-122.2667431	37.82092	2006	109	0	1	4	9	0	0	0	1
4908914	-122.2667431	37.82092	2010	109	0	5	3	0	0	0	1	0
5542007	-122.2668078	37.82066	2011	109	0	1	1	3	1	0	0	1
5663148	-122.2668078	37.82066	2011	109	0	3	3	3	0	0	1	1
6394729	-122.2667634	37.8208	2013	109	0	7	4	8	0	0	0	1
6617339	-122.26673	37.8209	2014	109	0	1	2	3	0	1	0	0
3462673	-122.2664775	37.8218	2007	109	0	5	4	22	0	0	0	1
4269794	-122.2664318	37.82196	2009	109	0	3	4	17	0	0	0	1
4366950	-122.2665568	37.8215	2009	109	0	1	4	17	0	0	0	1

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

4669650	-122.2665299	37.82161	2010	109	0	4	4	21	0	0	0	1
6086963	-122.2664775	37.8218	2013	109	0	5	3	8	0	0	1	0
6612142	-122.26651	37.8216	2014	109	0	1	4	0	0	0	0	1
4079335	-122.2662776	37.8225	2009	109	0	5	4	21	0	0	0	2
4302749	-122.26628	37.82244	2009	109	0	2	4	12	0	0	0	1
4427451	-122.2661769	37.82285	2009	109	0	4	3	11	0	0	1	0
4854472	-122.2662931	37.82245	2010	109	0	5	3	9	0	0	1	0
5138907	-122.2662931	37.82245	2010	109	0	2	4	3	0	0	0	2
5296532	-122.26628	37.82244	2011	109	0	5	4	10	0	0	0	1
6113078	-122.2662776	37.8225	2013	109	0	7	4	3	0	0	0	1
3295554	-122.2659058	37.82392	2007	109	0	3	1	8	1	0	0	0
2605538	-122.2655031	37.82536	2006	109	0	4	4	1	0	0	0	2
3056518	-122.2655031	37.82536	2007	109	0	4	4	12	0	0	0	1
3473607	-122.265512	37.82533	2007	109	0	4	3	21	0	0	1	0
3939278	-122.2655179	37.82531	2008	109	0	5	4	11	0	0	0	1
4631123	-122.2655031	37.82537	2010	109	0	1	4	3	0	0	0	1
4848461	-122.2655105	37.82534	2010	109	0	5	4	3	0	0	0	1
5375057	-122.26549	37.82536	2011	109	0	3	3	9	0	0	1	0
5500708	-122.26549	37.82536	2012	109	0	7	2	11	0	1	0	0
5504035	-122.2655011	37.82537	2012	109	0	3	3	10	0	0	1	0
2738901	-122.2649628	37.82742	2006	109	0	4	4	3	0	0	0	1
2845886	-122.2651283	37.82677	2006	109	0	5	4	3	0	0	0	1
3184738	-122.2649556	37.82745	2007	109	0	1	4	8	0	0	0	1
4941683	-122.2650631	37.82705	2010	109	0	6	4	9	0	0	0	1
3646735	-122.2647131	37.82832	2007	109	0	3	4	10	0	0	0	2
5690367	-122.2647	37.82831	2012	109	0	2	4	9	0	0	0	1
6101851	-122.2647207	37.8283	2013	109	0	3	4	10	0	0	0	1
6109328	-122.2645999	37.8287	2013	109	0	7	4	3	0	0	0	1
6798710	-122.2647	37.8283	2014	109	0	7	2	10	0	1	0	0
2834268	-122.2645344	37.82899	2006	109	0	3	4	0	0	0	0	1
2687180	-122.2644844	37.82915	2006	109	0	2	4	11	0	0	0	1
3039436	-122.2644446	37.8293	2007	109	0	2	4	7	0	0	0	1
3369317	-122.2645131	37.82907	2007	109	0	4	4	9	0	0	0	16
3594624	-122.2645131	37.82907	2008	109	0	3	3	9	0	0	1	0
3624834	-122.2645035	37.8291	2008	109	0	4	4	11	0	0	0	1

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

3967311	-122.2645131	37.82907	2008	109	0	1	4	12	0	0	0	1
4401886	-122.2645	37.82907	2009	109	0	3	4	9	0	0	0	2
4886354	-122.2645035	37.8291	2010	109	0	3	4	4	0	0	0	1
5036590	-122.2644988	37.82911	2010	109	0	1	4	11	0	0	0	1
5187267	-122.2644892	37.82914	2011	109	0	1	3	11	0	0	1	0
5252889	-122.2645	37.82907	2011	109	0	2	4	8	0	0	0	1
5272738	-122.2645	37.82907	2011	109	0	6	4	9	0	0	0	1
5353817	-122.2645	37.82907	2011	109	0	3	4	10	0	0	0	1
5443842	-122.2645153	37.82907	2011	109	0	6	3	5	0	0	1	0
5622214	-122.2645	37.82907	2012	109	0	7	3	0	0	0	1	0
5729099	-122.2645	37.82907	2012	109	0	1	4	22	0	0	0	1
5780160	-122.2645	37.82907	2012	109	0	2	4	9	0	0	0	1
5796275	-122.2645839	37.82881	2012	109	0	5	3	18	0	0	1	0
6052910	-122.2643833	37.8295	2013	109	0	7	4	3	0	0	0	1
6190669	-122.2645	37.8291	2013	109	0	5	4	9	0	0	0	5
6332241	-122.2645112	37.8291	2013	109	0	7	4	0	0	0	0	1
6386857	-122.2645	37.8291	2014	109	0	5	4	3	0	0	0	1
6532983	-122.2645	37.8291	2014	109	0	6	4	9	0	0	0	1
6430177	-122.2645	37.8291	2014	109	0	4	4	12	0	0	0	1
6510459	-122.2645	37.8291	2014	109	0	1	3	8	0	0	1	0
6532976	-122.2645	37.8291	2014	109	0	3	4	0	0	0	0	1
6580198	-122.2645	37.8291	2014	109	0	6	4	9	0	0	0	1
6614784	-122.2645	37.8291	2014	109	0	5	4	3	0	0	0	1
6712793	-122.2645	37.8291	2014	109	0	5	4	12	0	0	0	1
3570290	-122.2642993	37.82988	2007	109	0	4	4	3	0	0	0	1
4197057	-122.26427	37.82994	2009	109	0	2	4	9	0	0	0	1
4392361	-122.26427	37.82994	2009	109	0	5	1	8	1	1	1	0
5014938	-122.2642831	37.82995	2010	109	0	1	3	10	0	0	1	1
5238673	-122.26427	37.82994	2011	109	0	2	4	9	0	0	0	1
5062047	-122.26427	37.82994	2011	109	0	3	4	4	0	0	0	1
5892023	-122.26427	37.82994	2012	109	0	3	4	12	0	0	0	1
6270051	-122.2643236	37.8298	2013	109	0	3	4	17	0	0	0	1
6327908	-122.2642933	37.8299	2013	109	0	6	4	3	0	0	0	1
6690708	-122.2650077	37.8273	2014	109	0	3	3	5	0	0	1	0
5221104	-122.26659	37.82131	2011	109	0	3	4	9	0	0	0	1

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

3479191 -122.2657231 37.82457 2007 109 0 4 4 10 0 0 0 1

CM1 ROAD DIET	
Fatal	3
Severe	5
Other Injury	21
Complaint of Pain	79
Total	108

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

MONTH_	CRASHTYP	INVOLVE	PED	PRIMARYRD	SECONDRD	DISTANCE	DIRECT	INTERSECT	PROCDATE	JURIS
10	A	C	A	TELEGRAPH AV	29TH ST	0		Y	3/27/2007	109
9	G	B	B	TELEGRAPH AV	29TH ST	0		Y	2/16/2008	109
8	E	I	F	TELEGRAPH AV	29TH ST	0		Y	4/10/2009	109
3	B	C	A	TELEGRAPH AV	29TH ST	96	N	N	4/15/2009	109
7	A	G	A	TELEGRAPH AV	29TH ST	0		Y	8/10/2011	109
11	H	G	A	TELEGRAPH AV	29TH ST	0		Y	12/3/2011	109
8	B	C	A	TELEGRAPH AV	29TH ST	0		Y	12/7/2012	109
9	C	C	A	TELEGRAPH AV	29TH ST	0		Y	5/22/2014	109
11	G	B	B	TELEGRAPH AV	29TH ST	0		Y	5/13/2014	109
3	C	C	A	TELEGRAPH AV	29TH ST	100	N	N	7/8/2014	109
1	D	C	A	TELEGRAPH AV	30TH ST	75	S	N	5/8/2006	109
3	C	C	A	TELEGRAPH AV	30TH ST	0		Y	7/26/2006	109
3	G	B	B	TELEGRAPH AV	30TH ST	0		Y	7/23/2007	109
8	C	C	A	TELEGRAPH AV	30TH ST	210	N	N	2/1/2008	109
5	C	C	A	TELEGRAPH AV	30TH ST	50	S	N	12/24/2009	109
12	H	G	A	TELEGRAPH AV	31ST ST	0		Y	6/19/2008	109
9	G	B	D	TELEGRAPH AV	31ST ST	50	N	N	4/8/2009	109
9	B	E	A	TELEGRAPH AV	31ST ST	75	S	N	6/9/2010	109
11	D	C	A	TELEGRAPH AV	31ST ST	0		Y	8/19/2010	109
12	-	B	D	TELEGRAPH AV	31ST ST	0		Y	10/4/2010	109
1	G	B	F	TELEGRAPH AV	31ST ST	0		N	3/22/2012	109
3	G	B	D	TELEGRAPH AV	31ST ST	100	S	N	4/21/2012	109
5	H	G	A	TELEGRAPH AV	31ST ST	20	N	N	9/9/2013	109
7	B	G	A	TELEGRAPH AV	31ST ST	0		Y	10/24/2013	109
12	C	C	A	TELEGRAPH AV	31ST ST	75	S	N	5/16/2014	109
7	A	C	A	TELEGRAPH AV	32ND ST	0		Y	11/1/2006	109
7	G	B	B	TELEGRAPH AV	32ND ST	0		Y	8/26/2011	109
9	C	C	A	TELEGRAPH AV	32ND ST	96	S	N	5/31/2012	109
9	C	C	A	TELEGRAPH AV	32ND ST	96	S	N	12/10/2012	109
10	B	C	A	TELEGRAPH AV	32ND ST	30	S	N	4/15/2014	109
6	H	A	A	TELEGRAPH AV	32ND ST	0		Y	9/15/2014	109
10	C	E	A	TELEGRAPH AV	33RD ST	60	N	N	4/7/2008	109
5	H	G	A	TELEGRAPH AV	33RD ST	120	N	N	1/28/2010	109
8	H	G	A	TELEGRAPH AV	33RD ST	50	S	N	4/20/2010	109

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

3 C	E	A	TELEGRAPH AV	33RD ST	10 S	N	2/16/2011	109
5 D	G	A	TELEGRAPH AV	33RD ST	60 N	N	2/20/2014	109
6 G	B	F	TELEGRAPH AV	33RD ST	0	Y	9/15/2014	109
1 C	C	A	TELEGRAPH AV	34TH ST	20 N	N	9/2/2009	109
5 D	C	A	TELEGRAPH AV	34TH ST	0	Y	1/27/2010	109
10 G	B	D	TELEGRAPH AV	34TH ST	150 N	N	7/29/2010	109
8 H	A	A	TELEGRAPH AV	34TH ST	0	Y	10/19/2011	109
12 C	C	A	TELEGRAPH AV	34TH ST	0	Y	12/6/2011	109
9 G	B	B	TELEGRAPH AV	34TH ST	0	Y	12/12/2012	109
5 C	C	A	TELEGRAPH AV	34TH ST	20 N	N	2/26/2014	109
3 C	E	A	TELEGRAPH AV	36TH ST	240 S	N	7/7/2008	109
2 B	C	A	TELEGRAPH AV	37TH ST	0	Y	6/12/2006	109
2 H	G	A	TELEGRAPH AV	37TH ST	0	Y	6/8/2007	109
11 D	C	A	TELEGRAPH AV	37TH ST	12 S	N	3/14/2008	109
9 G	B	D	TELEGRAPH AV	37TH ST	20 S	N	4/28/2009	109
3 C	C	A	TELEGRAPH AV	37TH ST	0	Y	1/10/2011	109
7 C	C	A	TELEGRAPH AV	37TH ST	10 S	N	8/3/2011	109
9 D	G	A	TELEGRAPH AV	37TH ST	0	Y	12/14/2012	109
1 G	B	E	TELEGRAPH AV	37TH ST	0	Y	6/8/2013	109
2 G	B	B	TELEGRAPH AV	37TH ST	3 N	N	7/10/2013	109
7 C	C	A	TELEGRAPH AV	38TH ST	140 N	N	11/10/2006	109
10 C	G	A	TELEGRAPH AV	38TH ST	100 S	N	1/31/2007	109
5 H	G	A	TELEGRAPH AV	38TH ST	150 N	N	9/20/2007	109
10 D	C	-	TELEGRAPH AV	38TH ST	0	Y	11/16/2011	109
10 G	B	B	TELEGRAPH AV	39TH ST	0	Y	4/10/2008	109
6 H	G	A	TELEGRAPH AV	39TH ST	0	Y	10/15/2013	109
3 G	B	B	TELEGRAPH AV	39TH ST	10 S	N	2/7/2014	109
5 C	C	A	TELEGRAPH AV	39TH ST	160 N	N	2/28/2014	109
9 G	B	B	TELEGRAPH AV	39TH ST	0	Y	2/2/2015	109
10 G	B	E	TELEGRAPH AV	40TH	30 S	N	1/17/2007	109
6 G	B	D	TELEGRAPH AV	40TH ST	30 N	N	10/12/2006	109
2 B	C	A	TELEGRAPH AV	40TH ST	84 N	N	5/29/2007	109
10 D	C	A	TELEGRAPH AV	40TH ST	0	Y	3/24/2008	109
2 D	C	A	TELEGRAPH AV	40TH ST	0	Y	9/19/2008	109
2 G	B	B	TELEGRAPH AV	40TH ST	10 N	N	9/8/2008	109

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

11 D	C	A	TELEGRAPH AV	40TH ST	0	Y	6/9/2009	109
9 A	C	A	TELEGRAPH AV	40TH ST	0	Y	6/15/2010	109
9 C	C	A	TELEGRAPH AV	40TH ST	10 N	N	10/13/2011	109
12 G	B	D	TELEGRAPH AV	40TH ST	15 N	N	12/6/2011	109
5 G	B	D	TELEGRAPH AV	40TH ST	25 N	N	8/15/2012	109
7 G	B	D	TELEGRAPH AV	40TH ST	0	Y	9/26/2012	109
8 A	C	A	TELEGRAPH AV	40TH ST	0	Y	1/10/2013	109
10 G	B	B	TELEGRAPH AV	40TH ST	0	Y	12/20/2012	109
12 H	G	A	TELEGRAPH AV	40TH ST	3 S	N	2/1/2013	109
3 H	G	A	TELEGRAPH AV	40TH ST	0 N	N	7/20/2013	109
6 H	G	A	TELEGRAPH AV	40TH ST	0	Y	9/27/2013	109
7 D	C	A	TELEGRAPH AV	40TH ST	0	Y	10/24/2013	109
7 H	G	A	TELEGRAPH AV	40TH ST	100 S	N	10/19/2013	109
4 F	A	A	TELEGRAPH AV	40TH ST	175 N	N	2/13/2014	109
8 A	C	A	TELEGRAPH AV	40TH ST	0	Y	3/21/2014	109
10 C	C	A	TELEGRAPH AV	40TH ST	2 N	N	4/23/2014	109
1 C	C	A	TELEGRAPH AV	40TH ST	0	Y	6/6/2014	109
1 A	C	A	TELEGRAPH AV	40TH ST	0	Y	7/26/2014	109
2 H	G	A	TELEGRAPH AV	40TH ST	0	Y	6/27/2014	109
3 H	A	A	TELEGRAPH AV	40TH ST	0	Y	2/26/2015	109
3 G	B	A	TELEGRAPH AV	40TH ST	0	Y	7/17/2014	109
6 D	C	A	TELEGRAPH AV	40TH ST	0	Y	9/18/2014	109
7 C	C	A	TELEGRAPH AV	40TH ST	0	Y	9/12/2014	109
8 D	C	A	TELEGRAPH AV	40TH ST	0	Y	12/23/2014	109
10 C	C	A	TELEGRAPH AV	41ST ST	24 S	N	4/9/2008	109
3 H	G	A	TELEGRAPH AV	41ST ST	0	Y	11/7/2009	109
8 E	I	A	TELEGRAPH AV	41ST ST	0 S	N	4/1/2010	109
12 G	B	B	TELEGRAPH AV	41ST ST	0	Y	12/12/2011	109
1 D	G	A	TELEGRAPH AV	41ST ST	0	Y	3/22/2012	109
1 C	C	A	TELEGRAPH AV	41ST ST	0	Y	3/20/2012	109
11 D	C	A	TELEGRAPH AV	41ST ST	0	Y	1/8/2014	109
8 H	G	A	TELEGRAPH AV	41ST ST	60 S	N	3/26/2014	109
9 C	C	A	TELEGRAPH AV	41ST ST	15 S	N	4/17/2014	109
10 G	B	F	TELEGRAPH AV	APGAR ST	90 S	N	12/29/2014	109
6 H	G	A	TELEGRAPH AV	HAWTHORNE AV	0	Y	9/19/2012	109

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

11 G	B	B	TELEGRAPH AV	36TH ST	0	N	5/20/2008	109
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ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

DATE_	TIME_	BADGE	JURIDIST	SHIFT	POP	SPECIAL	BEATTYPE	LAPDDIV	BEATCLAS	BEATNUM	WEATHER2	STATEHW	CALTRANC
10/19/2006	1202	7486	2		5	7	0	0		0 06X	-	N	
9/25/2007	1229	8483T			5	7	0	0		0 08X	-	N	
8/11/2008	1438	8214	1		5	7	0	0		0 08X	-	N	
3/27/2009	1700				5	7	0	0		0	-	N	
7/28/2010	2136	8100	1		5	7	0	0		0 08X	-	N	
11/18/2010	930	7676	1		5	7	0	0		0 08X	-	N	
8/17/2011	955	8347	1		5	7	0	0		0 08X	-	N	
9/23/2013	1929	8304	2		5	7	0	0		0	-	N	
11/21/2013	1500	9073	1		5	7	0	0		0 08X	-	N	
3/11/2014	1457	9097	1		5	7	0	0		0 13X	-	N	
1/11/2006	1646	8180P	2		5	7	0	0		0 08X	-	N	
3/10/2006	1011	8255P			5	7	0	0		0 08X	-	N	
3/14/2007	820	8214	2		5	7	0	0		0 08X	-	N	
8/30/2007	1400	8837			5	7	0	0		0 08X	-	N	
5/29/2009	1200	8982	2		5	7	0	0		0 08X	-	N	
12/14/2007	1840	8476	1		5	7	0	0		0 08X	-	N	
9/25/2008	1313	8203	1		5	7	0	0		0 08X	-	N	
9/17/2009	2220	7993	1		5	7	0	0		0 08X	-	N	
11/17/2009	1500	8079	2		5	7	0	0		0 08X	-	N	
12/19/2009	1755	8929	1		5	7	0	0		0 08X	-	N	
1/5/2011	1919	8696	2		5	7	0	0		0 08X	-	N	
3/6/2011	2024	8875	1		5	7	0	0		0 08X	-	N	
5/29/2012	1124	9105	1		5	7	0	0		0 08X	-	N	
7/6/2012	2218	8374	1		5	7	0	0		0 08X	-	N	
12/23/2013	950	9139	1		5	7	0	0		0 08X	-	N	
7/3/2006	1335	7320			5	7	0	0		0 08X	-	N	
7/9/2010	1402	8953	1		5	7	0	0		0 08X	-	N	
9/26/2011	1515	7591	1		5	7	0	0		0 08X	-	N	
9/28/2011	1515	7591	1		5	7	0	0		0 08X	-	N	
10/20/2013	1655	9190	1		5	7	0	0		0 08X	-	N	
6/23/2014	830	9255	1		5	7	0	0		0 08X	-	N	
10/19/2007	10	8646P	2		5	7	0	0		0 08X	-	N	
5/13/2009	1430	8563	1		5	7	0	0		0 08X	-	N	
8/10/2009	2055	8929	1		5	7	0	0		0 08X	-	N	

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

3/25/2010	1441	8606	1	5	7	0	0	0 08X	-	N
5/3/2013	1145	9073	1	5	7	0	0	0 08X	-	N
6/2/2014	1552	9190	1	5	7	0	0	0 08X	-	N
1/23/2009	1214	8214	1	5	7	0	0	0 08X	-	N
5/19/2009	1441	810	1	5	7	0	0	0 08X	-	N
10/1/2009	1959	8606	1	5	7	0	0	0 08X	-	N
8/20/2010	1537	8214	1	5	7	0	0	0 08X	-	N
12/14/2010	1508	8696	1	5	7	0	0	0 08X	-	N
9/9/2011	1216	8454	1	5	7	0	0	0 08X	-	N
5/5/2013	1238	9073	1	5	7	0	0	0 08X	-	N
3/7/2007	1044	8085		5	7	0	0	0 08X	-	N
2/9/2006	102	7635	2	5	7	0	0	0 08X	-	N
2/22/2007	950	7615		5	7	0	0	0 08X	-	N
11/29/2007	1425			5	7	0	0	0	-	N
9/26/2008	1353	8214	2	5	7	0	0	0 08X	-	N
3/8/2010	1356	8790	1	5	7	0	0	0 08X	-	N
7/30/2010	1848	8660	1	5	7	0	0	0 08X	-	N
9/28/2011	1927	8390	1	5	7	0	0	0 08X	-	N
1/22/2012	2325	9000	1	5	7	0	0	0 08X	-	N
2/1/2012	1930	8390	1	5	7	0	0	0 08X	-	N
7/27/2006	1318	8243	2	5	7	0	0	0 12X	-	N
10/13/2006	1015	8214	2	5	7	0	0	0 08X	-	N
5/21/2007	1030	7293		5	7	0	0	0	12 -	N
10/2/2010	1450	8199	1	5	7	0	0	0 08X	-	N
10/31/2007	1839	8476		5	7	0	0	0	-	N
6/5/2012	1209	8700	1	5	7	0	0	0 08X	-	N
3/20/2013	2020	8347	1	5	7	0	0	0 08X	-	N
5/26/2013	1725	8776	1	5	7	0	0	0 08X	-	N
9/7/2014	1350	9255	1	5	7	0	0	0 08X	-	N
10/4/2006	10	7357		5	7	0	0	0 08X	-	N
6/20/2006	1120	7911P	2	5	7	0	0	0 08X	-	N
2/13/2007	950	8214	2	5	7	0	0	0 08X	-	N
10/4/2007	938	8214	2	5	7	0	0	0 08X	-	N
2/6/2008	1205	8214	2	5	7	0	0	0 08X	-	N
2/21/2008	1830	8226T	2	5	7	0	0	0 08X	-	N

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

11/24/2008	1717	8927	1	5	7	0	0	0 08X	-	N
9/16/2009	1529	8982	1	5	7	0	0	0 08X	-	N
9/15/2010	1857	8660	1	5	7	0	0	0 08X	-	N
12/27/2010	2100	8517	1	5	7	0	0	0 12X	-	N
5/2/2011	2125	8660	1	5	7	0	0	0 12X	-	N
7/19/2011	1956	8696	2	5	7	0	0	0 08X	-	N
8/20/2011	2019	8875	1	5	7	0	0	0 08X	-	N
10/19/2011	1017	8246		5	7	0	0	0 08X	-	N
12/3/2011	1200	8624	1	5	7	0	0	0 08X	-	N
3/25/2012	1515	7975	1	5	7	0	0	0 12X	-	N
6/25/2012	1640	8875	1	5	7	0	0	0 08X	-	N
7/3/2012	1340	8700	2	5	7	0	0	0 12X	-	N
7/27/2012	1320	8413	1	5	7	0	0	0	8 -	N
4/7/2013	1958	9135	1	5	7	0	0	0 08X	-	N
8/2/2013	2009	9119	1	5	7	0	0	0 12X	-	N
10/20/2013	1300	9190	1	5	7	0	0	0 08X	-	N
1/24/2014	755	9083	1	5	7	0	0	0 12X	-	N
1/25/2014	735	9124	1	5	7	0	0	0 08X	-	N
2/27/2014	1550	8397	1	5	7	0	0	0 08X	-	N
3/24/2014	1753	9190	1	5	7	0	0	0 08X	-	N
3/26/2014	1433	9190	1	5	7	0	0	0 08X	-	N
6/14/2014	1000	7726	1	5	7	0	0	0 08X	-	N
7/11/2014	1648	9210	1	5	7	0	0	0 08X	-	N
8/15/2014	930	9231	1	5	7	0	0	0 08X	-	N
10/18/2007	1845	8476	1	5	7	0	0	0 12X	-	N
3/31/2009	1958	8808	1	5	7	0	0	0 12X	-	N
8/28/2009	443	7486		5	7	0	0	0 12X	-	N
12/20/2010	1625	8444	2	5	7	0	0	0 12X	C	N
1/11/2011	1539	8037	1	5	7	0	0	0 12X	-	N
1/19/2011	1530	8073	2	5	7	0	0	0 12X	-	N
11/28/2012	1142	8339	1	5	7	0	0	0 12X	-	N
8/14/2013	1815	8343	1	5	7	0	0	0 12Y	-	N
9/7/2013	1700	8660	1	5	7	0	0	0 12X	-	N
10/1/2014	1910	8343	1	5	7	0	0	0 08X	-	N
6/29/2011	1723	8217	1	5	7	0	0	0 08X	-	N

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

11/8/2007	1958	8226	1	5	7	0	0		0	8 -	N
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ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

CALTRANS	ROUTE	ROUTE	POST	POST	LOC	RAMP	SIDE	TOW	AWAY	PARTIES	PCF	VIOL	CODE	VIOL	VIOL	SUB
0	0	0	0	0	0			Y			3 A	-		21801	A	
0	0	0	0	0	0			N			2 A	-		21950	A	
0	0	0	0	0	0			Y			2 A	-		22350		
	0	0	0	0	0			N			2 A	-		22106		
	0	0	0	0	0			N			2 A	-		21801	A	
	0	0	0	0	0			N			2 A	-		21801	A	
	0	0	0	0	0			Y			2 A	-		21457	A	
0	0	0	0	0	0			N			2 D	-		0		
0	0	0	0	0	0			N			2 A	-		21950	A	
0	0	0	0	0	0			N			2 A	-		22350		
0	0	0	0	0	0			Y			2 A	-		22107		
0	0	0	0	0	0			N			2 A	-		22350		
0	0	0	0	0	0			N			2 A	-		21950	A	
0	0	0	0	0	0			N			2 D	-		0		
	0	0	0	0	0			N			2 A	-		22350		
0	0	0	0	0	0			N			2 A	-		21801	A	
0	0	0	0	0	0			N			2 A	-		22102		
	0	0	0	0	0			N			3 A	-		22107		
	0	0	0	0	0			N			2 A	-		21801	A	
	0	0	0	0	0			N			2 A	-		21954	A	
	0	0	0	0	0			N			2 A	-		22106		
	0	0	0	0	0			N			2 A	-		21954	A	
0	0	0	0	0	0			N			2 A	-		21804	A	
0	0	0	0	0	0			N			2 A	-		22107		
0	0	0	0	0	0			N			2 A	-		22107		
0	0	0	0	0	0			Y			2 A	-		21801	A	
	0	0	0	0	0			N			2 D	-		0		
	0	0	0	0	0			Y			2 A	-		22350		
	0	0	0	0	0			Y			2 A	-		22350		
0	0	0	0	0	0			N			2 A	-		22107		
0	0	0	0	0	0			N			1 A	-		22350		
0	0	0	0	0	0			Y			2 B	-		0		
	0	0	0	0	0			N			2 A	-		22517		
	0	0	0	0	0			N			2 A	-		22517		

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

	0	0	N	2 A	-	22106
0	0	0	N	2 A	-	22107
0	0	0	N	2 D	-	0
	0	0	N	2 A	-	22106
	0	0	Y	3 A	-	21453 A
	0	0	N	2 A	-	21954 A
	0	0	N	2 A	-	21801 A
	0	0	N	2 A	-	22350
	0	0	N	2 A	-	21950 A
0	0	0	N	2 A	-	22350
0	0	0	Y	2 A	-	22107
0	0	0	Y	3 A	-	23152 A
0	0	0	N	2 A	-	22450
0	0	0	N	2 A	-	22106
0	0	0	N	2 A	-	21954 A
	0	0	Y	4 A	-	22350
	0	0	N	2 A	-	22350
	0	0	N	2 A	-	21802 A
0	0	0	N	2 A	-	21954 A
0	0	0	N	2 A	-	21950 A
0	0	0	N	3 A	-	22350
0	0	0	N	2 A	-	22350
0	0	0	N	2 A	-	22107
	0	0	N	2 A	-	21802 A
0	0	0	Y	3 A	-	21950 A
0	0	0	N	2 A	-	21802 A
0	0	0	N	2 A	-	21950 A
0	0	0	N	2 A	-	22350
0	0	0	N	2 A	-	21950 A
0	0	0	N	2 D	-	0
0	0	0	N	2 A	-	21954 A
0	0	0	N	2 A	-	21658 A
0	0	0	Y	2 A	-	21801 A
0	0	0	Y	2 A	-	21801 A
0	0	0	N	2 A	-	21453 D

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

0	0	0	N	2 A	-	21453 A	
	0	0	N	3 A	-	21806 A	
	0	0	N	2 A	-	21703	
	0	0	N	2 A	-	21954 A	
	0	0	N	2 A	-	21950 B	
	0	0	N	2 A	-	22107	
	0	0	N	2 A	-	21801 A	
	0	0	N	2 A	-	21950 A	
	0	0	N	2 A	-	21650	1
0	0	0	N	2 D	-	0	
0	0	0	N	2 B	-	0	
0	0	0	Y	2 A	-	21801 A	
0	0	0	N	2 C	-	0	
0	0	0	N	1 A	-	22350	
0	0	0	N	2 A	-	21801 A	
0	0	0	N	2 D	-	0	
0	0	0	N	2 A	-	22350	
0	0	0	N	2 A	-	21801 A	
0	0	0	N	2 A	-	21453 A	
0	0	0	N	1 A	-	22107	
0	0	0	N	2 D	-	0	
0	0	0	Y	2 A	-	21806 A	
0	0	0	N	2 A	-	22350	
0	0	0	N	2 A	-	21453 A	
0	0	0	N	3 A	-	22350	
	0	0	N	2 A	-	21801 A	
	0	0	Y	1 A	-	22107	
	0	0	N	3 A	-	21950 A	
	0	0	N	2 A	-	21802 B	
	0	0	N	2 A	-	21703	
0	0	0	Y	2 A	-	22450 A	
0	0	0	N	2 A	-	22517	
0	0	0	N	2 A	-	22350	
0	0	0	N	2 A	-	21202 A	
	0	0	N	2 A	-	21801 A	

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

0 0 0 N 2 A - 21950 A

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

HITRUN	ROADSURF	RDCOND1	RDCOND2	LIGHTING	RIGHTWAY	CHPRDTYP	NOTPRIV	STFAULT	CHPFAULT	PEDKILL	PEDINJ	BICKILL	BICINJ
N	A	H	-	A	A		O Y	A		1	0	0	0
N	A	H	-	A	A		O Y	A		1	0	1	0
N	A	H	-	A	A		O Y	A		1	0	1	0
N	A	H	-	A	A		O Y	A		1	0	0	0
N	A	H	-	C	A		O Y	A		1	0	0	0
N	A	H	-	A	D		O Y	D		22	0	0	0
N	A	H	-	A	A		O Y	C		2	0	0	0
N	A	H	-	B	A		O Y	-	-		0	0	0
N	A	H	-	A	A		O Y	A		1	0	1	0
N	A	H	-	A	A		O Y	A		7	0	0	0
N	A	H	-	A	A		O Y	D		22	0	0	0
N	A	H	-	A	A		O Y	-	-		0	0	0
F	A	H	-	A	A		O Y	-	-		0	1	0
N	A	H	-	A	D		O Y	-	-		0	0	0
M	A	H	-	A	A		O Y	A		1	0	0	0
N	A	H	-	C	A		O Y	A		1	0	0	0
N	A	H	-	A	D		O Y	A		7	0	1	0
N	A	H	-	C	D		O Y	L		4	0	0	0
N	A	H	-	A	D		O Y	A		1	0	0	0
M	A	H	-	C	D		O Y	N		60	0	1	0
N	A	H	-	C	D		O Y	D		22	0	1	0
N	B	H	-	C	D		O Y	N		60	0	1	0
N	A	H	-	A	D		O Y	A		1	0	0	0
N	A	H	-	B	D		O Y	A		1	0	0	0
N	A	H	-	A	A		O Y	L		4	0	0	0
N	A	H	-	A	D		O Y	-	-		0	0	0
N	A	H	-	A	D		O Y	-	-		0	1	0
N	A	H	-	A	D		O Y	A		1	0	0	0
N	A	H	-	A	D		O Y	A		1	0	0	0
N	A	H	-	A	D		O Y	A		1	0	0	0
N	A	H	-	A	D		O Y	C		3	0	0	0
N	A	H	-	C	D		O Y	J		48	0	0	0
N	A	H	-	A	D		O Y	A		1	0	0	0
N	A	H	-	A	D		O Y	A		1	0	0	0

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

N	A	H	-	A	A	0 Y	D		22	0	0	0	0
N	A	H	-	A	D	0 Y	A		1	0	0	0	1
N	A	H	-	A	D	0 Y	-	-		0	1	0	0
N	B	H	-	A	A	0 Y	A		1	0	0	0	0
N	A	H	-	A	A	0 Y	A		1	0	0	0	0
N	A	H	-	C	A	0 Y	N		60	0	1	0	0
N	A	H	-	A	A	0 Y	A		1	0	0	0	1
M	B	H	-	A	A	0 Y	A		7	0	0	0	0
N	A	H	-	A	A	0 Y	A		1	0	1	0	0
N	A	H	-	A	A	0 Y	A		1	0	0	0	0
N	A	H	-	A	D	0 Y	-	-		0	0	0	0
N	A	H	-	C	D	0 Y	-	-		0	0	0	0
N	B	H	-	A	A	0 Y	A		1	0	0	0	1
N	A	H	-	A	D	0 Y	A		1	0	0	0	0
N	A	H	-	A	D	0 Y	N		60	0	1	0	0
N	A	H	-	A	A	0 Y	A		7	0	0	0	0
N	A	H	-	A	A	0 Y	A		1	0	0	0	0
N	A	H	-	C	A	0 Y	A		8	0	0	0	1
N	B	H	-	C	D	0 Y	N		60	0	1	0	0
N	A	H	-	C	D	0 Y	A		1	0	1	0	0
N	A	H	-	A	D	0 Y	-	-		0	0	0	0
N	A	H	-	A	A	0 Y	-	-		0	0	0	1
N	A	H	-	A	D	0 Y	-	-		0	0	0	1
N	A	H	-	A	B	0 Y	N		60	0	0	0	0
F	A	H	-	C	D	0 Y	A		1	0	2	0	0
N	A	H	-	A	A	0 Y	A		1	0	0	0	1
N	A	H	-	C	D	0 Y	A		1	0	1	0	0
N	A	H	-	A	D	0 Y	C		2	0	0	0	0
N	A	H	-	A	D	0 Y	A		7	0	1	0	0
M	A	H	-	C	A	0 Y	-	-		0	1	0	0
N	A	H	-	A	A	0 Y	N		60	0	1	0	0
N	A	H	-	A	D	0 Y	-	-		0	0	0	0
N	A	H	-	A	A	0 Y	A		1	0	0	0	0
N	A	H	-	A	A	0 Y	C		2	0	0	0	0
N	A	H	-	C	A	0 Y	N		60	0	1	0	0

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

M	A	H	-	C	A	0 Y	-	-	0	0	0	0
N	A	H	-	A	A	0 Y	A	1	0	0	0	0
M	A	H	-	A	A	0 Y	A	1	0	0	0	0
N	A	H	-	C	A	0 Y	N	60	0	1	0	0
N	A	H	-	C	A	0 Y	N	60	0	1	0	0
F	A	H	-	A	A	0 Y	F	25	0	1	0	0
N	A	H	-	C	A	0 Y	A	7	0	0	0	0
N	A	H	-	A	A	0 Y	A	7	0	1	0	0
N	A	H	-	A	A	0 Y	L	4	0	0	0	1
N	A	H	-	A	D	0 Y	-	-	0	0	0	1
N	A	H	-	A	A	0 Y	L	4	0	0	0	1
N	A	H	-	A	A	0 Y	A	1	0	0	0	0
N	A	H	-	A	A	0 Y	-	-	0	0	0	1
N	A	H	-	C	A	0 Y	C	2	0	0	0	0
N	A	H	-	A	A	0 Y	A	1	0	0	0	0
N	A	H	-	A	A	0 Y	-	-	0	0	0	0
N	A	H	-	A	A	0 Y	A	1	0	0	0	0
N	A	H	-	A	A	0 Y	A	1	0	0	0	0
N	A	H	-	A	A	0 Y	L	4	0	0	0	1
N	A	H	-	A	A	0 Y	I	11	0	0	0	0
N	A	H	-	A	A	0 Y	-	-	0	0	0	0
N	A	H	-	A	A	0 Y	A	1	0	0	0	0
M	A	H	-	A	A	0 Y	A	1	0	0	0	0
N	A	H	-	A	A	0 Y	A	1	0	0	0	0
M	A	H	-	C	D	0 Y	A	1	0	0	0	0
N	A	H	-	A	A	0 Y	A	1	0	0	0	1
N	A	H	-	C	D	0 Y	A	7	0	0	0	0
N	B	H	-	C	D	0 Y	A	1	0	2	0	0
N	B	H	-	A	A	0 Y	A	1	0	0	0	1
N	A	H	-	A	D	0 Y	A	1	0	0	0	0
N	B	H	-	A	D	0 Y	A	1	0	0	0	0
N	A	H	-	A	D	0 Y	A	1	0	0	0	1
N	A	H	-	A	A	0 Y	A	1	0	0	0	0
N	A	H	-	C	D	0 Y	L	4	0	1	0	0
N	A	H	-	A	A	0 Y	D	22	0	0	0	1

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

N A H - B D 0 Y A 1 0 1 0 0

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

[illegible]

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

[illegible]

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

[illegible]

ATTACHMENT 8A - COUNTERMEASURE 1 ROAD DIET COLLISIONS ON TELEGRAPH

0	0 -	-	OAKLAND ALAMEDA CA	0	0
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ATTACHMENT 8B - COUNTERMEASURE 2 UNCONTROLLED CROSSWALK ENHANCEMENTS ON TELEGRAPH

CASEID	POINT_X	POINT_Y	YEAR_	LOCATION	CHPTYPE	DAYWEEK	CRASHSEV	VIOLCAT	KILLED	SEVINJ	OTHERINJ	COP	INJURED
3377913	-122.2675	37.81821442	2007	109	0	2	4	10	0	0	0	1	1
6313272	-122.2674	37.8182	2013	109	0	4	2	10	0	1	0	0	1
3097344	-122.2672	37.81902313	2007	109	0	3	4	10	0	0	0	1	1
4551174	-122.267	37.81996	2009	109	0	6	4	11	0	0	0	1	1
5083909	-122.267	37.81996	2011	109	0	3	4	21	0	0	0	1	1
3964174	-122.267	37.82009888	2008	109	0	4	4	8	0	0	0	1	1
4908914	-122.2667	37.820915	2010	109	0	5	3	0	0	0	1	0	1
6612142	-122.2665	37.8216	2014	109	0	1	4	0	0	0	0	1	1
5296532	-122.2663	37.82244	2011	109	0	5	4	10	0	0	0	1	1
3479191	-122.2657	37.82456589	2007	109	0	4	4	10	0	0	0	1	1
5500708	-122.2655	37.82536	2012	109	0	7	2	11	0	1	0	0	1
5504035	-122.2655	37.82537309	2012	109	0	3	3	10	0	0	1	0	1
3939278	-122.2655	37.82530975	2008	109	0	5	4	11	0	0	0	1	1
3646735	-122.2647	37.82831573	2007	109	0	3	4	10	0	0	0	2	2
6798710	-122.2647	37.8283	2014	109	0	7	2	10	0	1	0	0	1
6101851	-122.2647	37.8283	2013	109	0	3	4	10	0	0	0	1	1
2834268	-122.2645	37.82899475	2006	109	0	3	4	0	0	0	0	1	1
5252889	-122.2645	37.82907	2011	109	0	2	4	8	0	0	0	1	1
6532976	-122.2645	37.8291	2014	109	0	3	4	0	0	0	0	1	1
5353817	-122.2645	37.82907	2011	109	0	3	4	10	0	0	0	1	1
3624834	-122.2645	37.82910156	2008	109	0	4	4	11	0	0	0	1	1
5036590	-122.2645	37.8291146	2010	109	0	1	4	11	0	0	0	1	1
5187267	-122.2645	37.82914099	2011	109	0	1	3	11	0	0	1	0	1
2687180	-122.2645	37.82915497	2006	109	0	2	4	11	0	0	0	1	1
5014938	-122.2643	37.829945	2010	109	0	1	3	10	0	0	1	1	2
3590216	-122.2636	37.83231354	2008	109	0	5	4	10	0	0	0	1	1
3240671	-122.2636	37.83230591	2007	109	0	2	4	10	0	0	0	1	1
5911243	-122.2636	37.8321831	2012	109	0	7	1	11	1	0	0	0	0

CM2 CROSSWALKS	
Fatal	1
Severe	3
Other Injury	4
Complaint of Pain	20
Total	28

ATTACHMENT 8B - COUNTERMEASURE 2 UNCONTROLLED CROSSWALK ENHANCEMENTS ON TELEGRAPH

CRASHTYP	INVOLVE	PED	PRIMARYRD	SECONDRD	DISTANCE	DIRECT	INTERSECT	PROCDATE	JURIS	DATE_	TIME_
G	B	B	TELEGRAPH AV	29TH ST		0	Y	2/16/2008	109	9/25/2007	1229
G	B	B	TELEGRAPH AV	29TH ST		0	Y	5/13/2014	109	11/21/2013	1500
G	B	B	TELEGRAPH AV	30TH ST		0	Y	7/23/2007	109	3/14/2007	820
-	B	D	TELEGRAPH AV	30th ST		0	Y	10/4/2010	109	12/19/2009	1755
G	B	F	TELEGRAPH AV	31ST ST		0	N	3/22/2012	109	1/5/2011	1919
G	B	D	TELEGRAPH AV	31ST ST		50 N	N	4/8/2009	109	9/25/2008	1313
G	B	B	TELEGRAPH AV	32ND ST		0	Y	8/26/2011	109	7/9/2010	1402
G	B	F	TELEGRAPH AV	33RD ST		0	Y	9/15/2014	109	6/2/2014	1552
G	B	B	TELEGRAPH AV	34TH ST		0	Y	#####	109	9/9/2011	1216
G	B	B	TELEGRAPH ST	36TH ST		0	N	5/20/2008	109	11/8/2007	1958
G	B	E	TELEGRAPH AV	37TH ST		0	Y	6/8/2013	109	1/22/2012	2325
G	B	B	TELEGRAPH AV	37TH ST		3 N	N	7/10/2013	109	2/1/2012	1930
G	B	D	TELEGRAPH AV	37TH ST		20 S	N	4/28/2009	109	9/26/2008	1353
G	B	B	TELEGRAPH AV	39TH ST		0	Y	4/10/2008	109	10/31/2007	1839
G	B	B	TELEGRAPH AV	39TH ST		0	Y	2/2/2015	109	9/7/2014	1350
G	B	B	TELEGRAPH AV	39TH ST		10 S	N	2/7/2014	109	3/20/2013	2020
G	B	E	TELEGRAPH AV	40TH		30 S	N	1/17/2007	109	10/4/2006	10
G	B	D	TELEGRAPH AV	40TH ST		0	Y	9/26/2012	109	7/19/2011	1956
G	B	A	TELEGRAPH AV	40TH ST		0	Y	7/17/2014	109	3/26/2014	1433
G	B	B	TELEGRAPH AV	40TH ST		0	Y	#####	109	10/19/2011	1017
G	B	B	TELEGRAPH AV	40TH ST		10 N	N	9/8/2008	109	2/21/2008	1830
G	B	D	TELEGRAPH AV	40TH ST		15 N	N	12/6/2011	109	12/27/2010	2100
G	B	D	TELEGRAPH AV	40TH ST		25 N	N	8/15/2012	109	5/2/2011	2125
G	B	D	TELEGRAPH AV	40TH ST		30 N	N	#####	109	6/20/2006	1120
G	B	B	TELEGRAPH AV	41ST ST		0	Y	#####	109	12/20/2010	1625
G	B	B	TELEGRAPH AV	44TH ST		0	Y	7/19/2008	109	1/25/2008	1508
B	B	B	TELEGRAPH AV	44TH ST		4 S	N	#####	109	6/26/2007	2219
G	B	D	TELEGRAPH AV	44TH ST		49 S	N	#####	109	12/2/2012	542

ATTACHMENT 8B - COUNTERMEASURE 2 UNCONTROLLED CROSSWALK ENHANCEMENTS ON TELEGRAPH

BADGE	JURIDIST	SHIFT	POP	SPECIAL	BEATTYPE	LAPDDIV	BEATCLAS	BEATNUM	WEATHER2	STATEHW	CALTRANC	CALTRAND	STROUTE	ROUTESUF
8483T			5	7	0	0	0 08X	-	N				0	0
9073	1		5	7	0	0	0 08X	-	N				0	0
8214	2		5	7	0	0	0 08X	-	N				0	0
8929	1		5	7	0	0	0 08X	-	N					0
8696	2		5	7	0	0	0 08X	-	N					0
8203	1		5	7	0	0	0 08X	-	N			0		0
8953	1		5	7	0	0	0 08X	-	N					0
9190	1		5	7	0	0	0 08X	-	N			0		0
8454	1		5	7	0	0	0 08X	-	N					0
8226	1		5	7	0	0	0	8 -	N			0		0
9000	1		5	7	0	0	0 08X	-	N			0		0
8390	1		5	7	0	0	0 08X	-	N			0		0
8214	2		5	7	0	0	0 08X	-	N			0		0
8476			5	7	0	0	0	-	N			0		0
9255	1		5	7	0	0	0 08X	-	N			0		0
8347	1		5	7	0	0	0 08X	-	N			0		0
7357			5	7	0	0	0 08X	-	N			0		0
8696	2		5	7	0	0	0 08X	-	N					0
9190	1		5	7	0	0	0 08X	-	N			0		0
8246			5	7	0	0	0 08X	-	N					0
8226T	2		5	7	0	0	0 08X	-	N			0		0
8517	1		5	7	0	0	0 12X	-	N					0
8660	1		5	7	0	0	0 12X	-	N					0
7911P	2		5	7	0	0	0 08X	-	N			0		0
8444	2		5	7	0	0	0 12X	C	N					0
8476	1		5	7	0	0	0 12X	-	N			0		0
8620			5	7	0	0	0 12X	-	N			0		0
7486	DIST2		5	7	0	0	0 12X	C	N			0		0

ATTACHMENT 8B - COUNTERMEASURE 2 UNCONTROLLED CROSSWALK ENHANCEMENTS ON TELEGRAPH

POSTPRE	POSTMILE	LOCATYPE	RAMP	SIDEHW	TOWAWAYPARTIES	PCF	VIOLCODE	VIOL	VIOLSUB	HITRUN	ROADSURF	RDCOND1	RDCOND2
	0				N	2 A	-	21950	A	N	A	H	-
	0				N	2 A	-	21950	A	N	A	H	-
	0				N	2 A	-	21950	A	F	A	H	-
	0				N	2 A	-	21954	A	M	A	H	-
	0				N	2 A	-	22106		N	A	H	-
	0				N	2 A	-	22102		N	A	H	-
	0				N	2 D	-	0		N	A	H	-
	0				N	2 D	-	0		N	A	H	-
	0				N	2 A	-	21950	A	N	A	H	-
	0				N	2 A	-	21950	A	N	A	H	-
	0				N	2 A	-	21954	A	N	B	H	-
	0				N	2 A	-	21950	A	N	A	H	-
	0				N	2 A	-	21954	A	N	A	H	-
	0				Y	3 A	-	21950	A	F	A	H	-
	0				N	2 A	-	21950	A	N	A	H	-
	0				N	2 A	-	21950	A	N	A	H	-
	0				N	2 D	-	0		M	A	H	-
	0				N	2 A	-	22107		F	A	H	-
	0				N	2 D	-	0		N	A	H	-
	0				N	2 A	-	21950	A	N	A	H	-
	0				N	2 A	-	21453	D	N	A	H	-
	0				N	2 A	-	21954	A	N	A	H	-
	0				N	2 A	-	21950	B	N	A	H	-
	0				N	2 A	-	21954	A	N	A	H	-
	0				N	3 A	-	21950	A	N	B	H	-
	0				N	2 A	-	21950	A	N	B	H	-
	0				N	2 A	-	21950	A	N	A	H	-
	0				N	2 A	-	21954	A	F	B	H	-

ATTACHMENT 8B - COUNTERMEASURE 2 UNCONTROLLED CROSSWALK ENHANCEMENTS ON TELEGRAPH

LIGHTING	RIGHTWAY	CHPRDTYP	NOTPRIV	STFAULT	CHPFAULT	PEDKILL	PEDINJ	BICKILL	BICINJ	MCKILL	MCINJURE	RAMP1	RAMP2	CITY
A	A	0 Y	A		1	0	1	0	0	0	0 -	-	OAKLAND	
A	A	0 Y	A		1	0	1	0	0	0	0 -	-	OAKLAND	
A	A	0 Y	-	-		0	1	0	0	0	0 -	-	OAKLAND	
C	D	0 Y	N		60	0	1	0	0	0	0 -	-	OAKLAND	
C	D	0 Y	D		22	0	1	0	0	0	0 -	-	OAKLAND	
A	D	0 Y	A		7	0	1	0	0	0	0 -	-	OAKLAND	
A	D	0 Y	-	-		0	1	0	0	0	0 -	-	OAKLAND	
A	D	0 Y	-	-		0	1	0	0	0	0 -	-	OAKLAND	
A	A	0 Y	A		1	0	1	0	0	0	0 -	-	OAKLAND	
B	D	0 Y	A		1	0	1	0	0	0	0 -	-	OAKLAND	
C	D	0 Y	N		60	0	1	0	0	0	0 -	-	OAKLAND	
C	D	0 Y	A		1	0	1	0	0	0	0 -	-	OAKLAND	
A	D	0 Y	N		60	0	1	0	0	0	0 -	-	OAKLAND	
C	D	0 Y	A		1	0	2	0	0	0	0 -	-	OAKLAND	
A	D	0 Y	A		7	0	1	0	0	0	0 -	-	OAKLAND	
C	D	0 Y	A		1	0	1	0	0	0	0 -	-	OAKLAND	
C	A	0 Y	-	-		0	1	0	0	0	0 -	-	OAKLAND	
A	A	0 Y	F		25	0	1	0	0	0	0 -	-	OAKLAND	
A	A	0 Y	-	-		0	0	0	0	0	0 -	-	OAKLAND	
A	A	0 Y	A		7	0	1	0	0	0	0 -	-	OAKLAND	
C	A	0 Y	N		60	0	1	0	0	0	0 -	-	OAKLAND	
C	A	0 Y	N		60	0	1	0	0	0	0 -	-	OAKLAND	
C	A	0 Y	N		60	0	1	0	0	0	0 -	-	OAKLAND	
A	A	0 Y	N		60	0	1	0	0	0	0 -	-	OAKLAND	
C	D	0 Y	A		1	0	2	0	0	0	0 -	-	OAKLAND	
A	D	0 Y	A		1	0	1	0	0	0	0 -	-	OAKLAND	
C	D	0 Y	-	-		0	1	0	0	0	0 -	-	OAKLAND	
C	A	0 Y	N		60	1	0	0	0	0	0 -	-	OAKLAND	

ATTACHMENT 8B - COUNTERMEASURE 2 UNCONTROLLED CROSSWALK ENHANCEMENTS ON TELEGRAPH

[illegible]

HSIP CYCLE 7 - ATTACHMENT 9

CRASH DATA SUMMARY SHEET

Important: Read the Instructions in the other sheet (tab) before entering data. Do not enter data in shaded fields (with formulas).

Agency:	City of Oakland, Telegraph Avenue, 2006-2014	Application ID:	04-Oakland-1	Prepared by:	RM	7/30.15													
LOCATION * (Intersection Name or Corridor Limit)						CM Number						CM Number						CM Number	
						1						2						-	
		Fatal	Severe Injury	Other Visible Injury	Complaint of Pain	PDO	Total	Fatal	Severe Injury	Other Visible Injury	Complaint of Pain	PDO	Total	Fatal	Severe Injury	Other Visible Injury	Complaint of Pain	PDO	Total
1	Telegraph Avenue/29th Street		2	1	7		10		1		1		2						
2	Telegraph Avenue/30th Street				5		5				1		1						
3	Telegraph Avenue/31st Street			4	6		10				3		3						
4	Telegraph Avenue/32nd Street	1	1	2	4		8			1			1						
5	Telegraph Avenue/Hawthorne Street				1														
6	Telegraph Avenue/33rd Street			1	5		6				1		1						
7	Telegraph Avenue/34th Street			2	5		7				1		1						
8	Telegraph Avenue/36th Street	1			1		2				1		1						
9	Telegraph Avenue/37th Street		1	3	5		9		1	1	1		3						
10	Telegraph Avenue/38th Street				4		4						0						
11	Telegraph Avenue/Apgar Street			1	0		1						0						
12	Telegraph Avenue/39th Street		1		4		5		1	1	1		3						
13	Telegraph Avenue/40th Street			6	24		30			1	7		8						
14	Telegraph Avenue/41th Street	1		1	8		10				1		1						
15	Telegraph Avenue/42nd Street																		
16	Telegraph Avenue/43rd Street																		
17	Telegraph Avenue/44th Street						0	1			2		3						
18	Telegraph Avenue/45th Street						0						0						
Countermeasure Total**		3	5	21	79	0	108	1	3	4	20	0	28						
* Crash Total for each Location must match the total shown on the Crash Diagrams and Crash Tables ** Crash Totals for each Countermeasure must match the Total Inputted shown into the TIMS B/C Calculator and B/C Summary Sheet																			

Counter Road diet (reduce travel lanes from 4 to 3 and add a two way left-turn and bike lane)

Counter Install pedestrian crossing at uncontrolled location (with enhanced safety features)

Countermeasure #3

Detailed Engineer's Estimate and Cost Breakdown by Countermeasure

ATTACHMENT 10

For Construction Items Only

Important: Read the Instructions in the other sheet before entering data.
Do not enter in shaded fields (with formulas).

Agency:	City of Oakland	Application ID:	04-Oakland-1	Prepared by:	RM	Date:	7/31/2015								
Project Description:		Road Diet between 29th and 41st; Crosswalk Enhancements; Protected Left-Turns at 29th Street													
Project Location:		Telegraph Avenue from 29th Street to 45th Street/Shattuck Avenue													
Engineer's Estimate (for Construction Items Only)						Cost Breakdown									
						Safety-Related Costs								Non Safety-Related Costs	
						Countermeasure #1		Countermeasure #2		Countermeasure #3		Other Safety-Related			
Item No.	Item Description	Quantity	Units	Unit Cost	Total	%	\$	%	\$	%	\$	%	\$	%	\$
1	Rectangular Rapid Flashing Beacons	5	Crosswalk	\$30,000.00	\$150,000			100	\$150,000						
3	Curb and Gutter	125	LF	\$50.00	\$6,250							100	\$6,250		
4	Curb Ramp	1	EA	\$5,000.00	\$5,000							100	\$5,000		
5	Concrete Sidewalk	420	SF	\$15.00	\$6,300							100	\$6,300		
6	Asphalt Patch	250	SF	\$8.00	\$2,000							100	\$2,000		
7	Thermoplastic Traffic Striping	52515	LF	\$1.50	\$78,773	100	\$78,773								
8	Thermoplastic Pavement Markings	1338	SF	\$3.40	\$4,549	100	\$4,549								
9	Epoxy	10180	SF	\$8.00	\$81,440			100	\$81,440						
10	Green Pavement Treatment	5275	SF	\$4.00	\$21,100	100	\$21,100								
12	Striping Removal	8000	LF	\$3.50	\$28,000	100	\$28,000								
13	Pavement Repair (Hazard Mitigation)	20500	SF	\$5.06	\$103,730	100	\$103,730								
14	Install Countdown Heads	2	Intersection	\$7,000.00	\$14,000							100	\$14,000		
15	Install Accessible Push Buttons	2	Intersection	\$10,000.00	\$20,000							100	\$20,000		
16	Install Signal Mast Arm	6	Approach	\$30,000.00	\$180,000							100	\$180,000		
17	Install Video Detection	2	Intersection	\$20,000.00	\$40,000							100	\$40,000		
18	Install Signal Pole with Signal Heads	4	Approach	\$6,000.00	\$24,000							100	\$24,000		
19	Drainage	1	EA	\$35,000.00	\$35,000							100	\$35,000		
20	Traffic Control	1	LS	\$41,000.00	\$41,000	30	\$12,300	29	\$11,890			42	\$17,220		
21	Mobilization	1	LS	\$81,000.00	\$81,000	30	\$24,300	29	\$23,490			42	\$34,020		
Sub Total of Construction Items:					\$922,142		\$272,752		\$266,820				\$383,790		
% of "Construction Items only" Cost per Countermeasure (Yellow fields - To be entered in TIMS B/C Calculator)						29.6%	CM #1	28.9%	CM #2		CM #3	41.6%	Other Safety		Non Safety
Construction Item Contingencies (% of Con Items): Enter in the cell to the right				20.00%	184,428										
Total (Construction Items & Contingencies):					1,106,600	(Rounded up to the nearest hundreds)									

Engineer's Estimate (for Construction Items Only)		Cost Breakdown				
		Safety-Related Costs				Non Safety-Related Costs
		Countermeasure #1	Countermeasure #2	Countermeasure #3	Other Safety-Related	
Maximum "HSIP/Total" percentage allowed for Construction		90%				

Benefit / Cost Calculation Result

1. Project Information

Application ID	04-Oakland-2	Agency	Oakland	Version	1
MPO/RTPA	Metropolitan Transportation Commission (MTC)				

2. Countermeasures and Crash Data

Crash Data Time Period	08/20/2009	to	02/21/2015	Years	5.51
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- Install pedestrian crossing at uncontrolled location (with enhanced safety features)

CM Number	Project Type	Crash Type	CRF	Life
NS18	Ped and Bike	Ped & Bike	35	20

Crash Type	Fatality (Death)	Severe Injury	Injury - Other Visible	Injury - Complaint of Pain	Property Damage Only	Total
Ped & Bike	2	3	5	6	0	16

Annual Benefit	\$ 693,064	Cost	\$ 1,131,643
Life Benefit	\$ 13,861,270	B/C Ratio	12.25

- Provide protected left turn phase (left turn lane already exists)

CM Number	Project Type	Crash Type	CRF	Life
S6	Signal Mod.	All	30	20

Crash Type	Fatality (Death)	Severe Injury	Injury - Other Visible	Injury - Complaint of Pain	Property Damage Only	Total
All	1	0	0	1	0	2

Annual Benefit	\$ 71,940	Cost	\$ 452,657
Life Benefit	\$ 1,438,802	B/C Ratio	3.18

3. Benefit Cost Result

Total Benefit	\$ 15,300,072
Total Cost	\$ 1,584,300
B/C Ratio	9.66

Safety Practitioner / Engineer: Rob Rees, PE

Signature: 

By signing this B/C Calculation Result, you are attesting to your authority / responsibility as the Engineer in Responsible Charge of the preparation of the HSIP application and you are attesting to the accuracy of the values on this page and that they have been entered into the HSIP Application Form correctly, **DO NOT SIGN** if any of this is not the case.



SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT

300 Lakeside Drive, P.O. Box 12688
Oakland, CA 94604-2688
(510) 464-6000

2015

Thomas M. Blalock, P.E.
PRESIDENT

Tom Radulovich
VICE PRESIDENT

Grace Crunican
GENERAL MANAGER

July 30, 2015

Wlad Wlassowsky
City of Oakland Public Works Agency
Transportation Services Division
250 Frank H. Ogawa Plaza, Ste 4344
Oakland, CA 94612

DIRECTORS

Gail Murray
1ST DISTRICT

Joel Keller
2ND DISTRICT

Rebecca Saltzman
3RD DISTRICT

Robert Raburn, Ph.D.
4TH DISTRICT

John McPartland
5TH DISTRICT

Thomas M. Blalock, P.E.
6TH DISTRICT

Zakhary Mallett, MCP
7TH DISTRICT

Nicholas Josefowitz
8TH DISTRICT

Tom Radulovich
9TH DISTRICT

SUBJECT: City of Oakland Highway Safety Improvement Program Grant Applications

Mr. Wlassowsky:

On behalf of the San Francisco Bay Area Rapid Transit District (BART), I am writing to express support for the City of Oakland's Highway Safety Improvement Program (HSIP) grant applications. These projects address, bicycle, and vehicular collisions by proposing various safety improvements. All four priority areas include improvements nearby or on access routes to BART stations:

- Telegraph Avenue Corridor – MacArthur and 19th St/Oakland BART Stations
- Market Street and San Pablo Avenue Corridor – West Oakland BART Station (connecting to 7th St)
- The Claremont Avenue & Shattuck Avenue Corridors – access routes to Rockridge and MacArthur stations.
- The Central Business District – 12th St/Oakland City Center, 19th St/Oakland, and Lake Merritt Stations

The BART Board of Directors adopted a Transit-Oriented Development Policy which includes a goal to reduce the access mode share of the automobile by enhancing multi-modal access to and from BART stations in partnership with communities and access providers. Improving bicycle, pedestrian and transit access to the station is critical to improving regional, and neighborhood, sustainability. Corroborating data of past pedestrian and bicyclist fatalities as well as right angle vehicular collisions support these roadways as the best candidates of HSIP grant funds. Improved pedestrian and bicycle safety near BART stations and along key access routes is essential to the support BART's continued efforts to encourage non-automobile access to BART stations.

BART supports the proposed projects and looks forward to seeing design details should they be funded. Please do not hesitate to contact me or Hannah Lindelof (HLindel@bart.gov), BART Senior Planner, at (510) 464-6426 if you have any questions or comments about this letter.

Sincerely,

Bob Franklin
San Francisco Bay Area Rapid Transit District (BART)
Department Manager, Customer Access and Accessibility



May 5, 2015

Wlad Wlassowsky
City of Oakland Public Works Agency, Transportation Services Division
250 Frank H. Ogawa Plaza, Ste 4344
Oakland, CA 94612

Re: Letter of Support of Oakland's HSIP Grant Applications

Mr. Wlassowsky:

Bike East Bay is happy to support your grant applications to the HSIP program and are delighted to know the City of Oakland is moving forward on four important projects where collisions are high and safety improvements are much needed. We look forward to working with the City of Oakland on these four projects, when funding is secured:

1. Telegraph Avenue Corridor
2. Market Street and San Pablo Avenue Corridor
3. The Claremont Avenue & Shattuck Avenue Corridors
4. The Central Business District

All represent four of the highest priority areas of the City's roadways. Corroborating data of past bicyclist fatalities as well as right angle vehicular collisions support these roadways as the best candidates of HSIP grant funds. And such improvements have broader safety implications for all users of the roadway, including pedestrians.

Telegraph Avenue:

Bike East Bay fully supports Oakland's application to fund the Telegraph Avenue Complete Street Project and we hope you can secure this most-worthy project. This multimodal project improves safety and comfort for all users of Telegraph Avenue, including thousands of people who bicycle Telegraph Avenue every day, as well as many pedestrians and transit users. Telegraph Avenue is a



critical multimodal corridor linking Downtown Oakland with UC Berkeley, one of the most bike popular destinations in the State of California. Unfortunately, the current configuration of Telegraph Avenue disproportionately serves automobile traffic at the expense of other roadway users. We have a great opportunity to change that and the community is ready to do it.

In fact, no complete street or active transportation project in the East Bay better addresses the goal of Caltrans in its recently proposed California 2040 plan to triple bicycling in the state by 2020 and the Governor's new target for greenhouse gas reductions of 40% by 2030. Yes, both the Governor and Caltrans have set a 'high bar' for California, matching the European Union's similar high bars. Oakland is doing its part to help the Governor and Caltrans meet these goals by designing and preparing to build a popular bikeway that bike-friendly European cities would be proud of. We need funding.

What makes Telegraph Avenue so special? First, Telegraph Ave is the most heavily used bikeway in the East Bay that does not have a bike lane. Counts at various intersections along the road exceed 1,000 people on bikes, and on Bike to Work Day, energizer stations along Telegraph Avenue see over 500 bike commuters during the morning commute alone. This is not surprising, as the Oakland metro area (Oakland, Berkeley, Alameda, Albany, Emeryville, Piedmont) is a top five metro area nationally for bicycling, and in fact may be number 2 nationally behind Portland (<https://bikeeastbay.org/news/oakland-metro-area-pushing-dc-2nd-nation-bike-commuting>). And we know from the American Communities Survey that Berkeley is ranked 4th nationally in bicycling, with UC Berkeley located right at the end of Telegraph Avenue. Telegraph is served by three BART stations and an AC Transit Rapid Bus line, which encourages many Oakland residents to bike to transit. In our opinion, the East Bay is the most bike-popular bike-to-transit metro area in the nation, and if the commute data captured it, we could be the nation's 2nd most bike popular metro area.

In 1999, Oakland was ready to stripe a bike lane on Telegraph Avenue by doing a 5-4 road diet. Unfortunately, a couple of wealthy local business owners banded together and filed a CEQA lawsuit, challenging the removal of a travel lane. Doubly unfortunately, a judge ruled against safe bike access on Telegraph Avenue, and required Oakland to do a full EIR in order to paint a white line on the street.

Then, AC Transit began work on a potential bus rapid transit project for Telegraph Ave, which further delayed progress on a new bikeway. Thoughtfully, AC Transit designed bike lanes into the BRT project but unfortunately the process for designing and approving the BRT project took ten years and in the end the Temescal neighborhood of Oakland vetoed the project. Now this neighborhood, and the KONO neighborhood are ready to fix Telegraph, thanks to a tremendous amount of



outreach by us and the City of Oakland. It was an exemplary, and exhausting, outreach effort, but well worth the effort to build support, which led to a unanimous City Council vote in December last year to approve bike lanes and complete streets improvements on Telegraph Avenue.

The grant will make significant improvements to Telegraph Avenue from approximately 17th Street to 40th Street, including continuous bicycle facilities, pedestrian crossing improvements, and transit boarding islands with bike lanes behind the bus islands. Work performed under this grant will dramatically improve safety for pedestrians and cyclists, and is consistent with Oakland's adopted Complete Streets policy.

Bike East Bay and our partner organization Walk Oakland Bike Oakland and the City of Oakland have worked together on numerous transportation projects. Through these experiences, we recognize the clear benefits to a safer and more multimodal Oakland. The work products of this important project will allow Oakland to realize these goals on Telegraph Avenue.

Bike East Bay looks forward to working closely with the City of Oakland on this important project. Once again, we urge Caltrans to fully fund Oakland's application for Telegraph Avenue HSIP funding.

Claremont Avenue:

Claremont Avenue is a busy thoroughfare in need of pedestrian and bicycling safety improvements. At many times of the day, this street functions as a freeway offramp, and in one of the most heavily used bike corridors in the East Bay. We have fought for bike lanes on Claremont Avenue in Oakland and Berkeley for many years, and done much public outreach to support a road diet with bike lanes and safer pedestrian crossings. The Oakland Bicycle Master Plan includes bike lanes on Claremont as does the City of Berkeley, yet today we have not been successful in getting the necessary funding to complete this project. I hope you can fund it in this cycle of the HSIP program

Market Street:

Market Street and San Pablo Avenue need many safety improvements, especially for safer walking. We support the City's proposed reduction of travel lanes along Market Street from 5th Street to San Pablo Avenue in order to make these improvements. Pedestrian crossing improvements along Market Street at six locations are sorely needed, as are similar safety improvements along San Pablo from 32nd Street to 34th Street at 3 locations. We hope you can also fund improvements to Market St and San Pablo Avenue.



Central Business District:

We support proposed countdown signals and audible signals Throughout the downtown grid at seven locations. Curb extensions for pedestrian visibility are important, as is a protected left turn phase. Four locations will have countdown signals and mast arms installed.

Thank you for your support of complete streets projects in Oakland.

Cordially yours,

A handwritten signature in black ink, which appears to read 'David Caplan'.

Advocacy Director



Service Development and Marketing
1600 Franklin Street, Oakland CA 94612

7/30/15

Wlad Wlassowsky
City of Oakland Public Works Agency, Transportation Services Division
250 Frank H. Ogawa Plaza, Ste 4344
Oakland, CA 94612

Re: Highway Safety Improvement Program

Mr. Wlassowsky:

The Alameda Contra Costa Transit District lends its support to your Highway Safety Improvement Program grant applications provided the proposals do not impede on our bus operations via lane reductions or conflicts with our path of travel and bus stops.

The below selected roadways represent four of the highest priority areas of the City's roadways.

1. Telegraph Avenue Corridor
2. Market Street and San Pablo Avenue Corridor
3. The Claremont Avenue & Shattuck Avenue Corridors
4. The Central Business District

Corroborating data of past pedestrian and bicyclist fatalities as well as right angle vehicular collisions support these roadways as the best candidates of HSIP grant funds. These improvements have broader safety implications for all users of the roadway.

AC Transit supports the proposed projects and look forward to seeing design details should they be funded.

Sincerely,

A handwritten signature in black ink, appearing to read 'Robert Del Rosario', with a stylized flourish at the end.

Robert Del Rosario
Director of Service Development
Alameda Contra Costa Transit District