

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.

Application ID 04-Oakland-5

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

Submitted By (Agency)

Oakland

Caltrans District

04

Application Number

5

Out of

6

Project Location

Intersections in Downtown Oakland in the area bounded by Broadway, 9th Street, Harrison Street, and 7th Street, also including the intersection of 10th Street and Harrison Street.

Project Description

Implementation of improvements at 13 intersections including signal mast arms, vehicle/bicycle detection, accessible pedestrian signal upgrade, and other improvements that have been shown to directly reduce severe injury and loss of life.

Countermeasure 1 S2: Improve signal hardware: lenses, back-plates, mounting, size, and number

Countermeasure 2 S7: Convert signal to mast arm (from pedestal-mounted)

Countermeasure 3

Total Expected Benefit \$2,730,801.00

Total Project Cost \$629,400.00

B/C Ratio (BCR) 4.34

**APPLICATION FORM FOR
CYCLE 8 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)**

DLA-002 (NEW 04/2016)

Application ID 04-Oakland-5

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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](#)

Intersections in Downtown Oakland in the area bounded by Broadway, 9th Street, Harrison Street, and 7th Street, also including the intersection of 10th Street and Harrison Street.

Project Description
-Be Brief (Limited to 250 Characters)
-[See Instructions](#)

Implementation of improvements at 13 intersections including signal mast arms, vehicle/bicycle detection, accessible pedestrian signal upgrade, and other improvements that have been shown to directly reduce severe injury and loss of life.

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 entirely 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 jointly-funded project with Caltrans? (Must be jointly-funded if the project is for intersection safety improvement involving SHS.)

- ☐ 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.

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Set-asides for Guardrail Upgrades and Crosswalk Enhancements/Pedestrian Countdown Heads

Are you applying for funding set-asides?

1. Set-aside for guardrail upgrades? OR2. Set-aside for crosswalk enhancements at unsignalized locations and/or pedestrian countdown heads at signalized intersections?

If you answer yes to one of the above two questions, no crash data and Benefit/Cost Ratio are needed in Section V. See Instructions for more details about the funding set-asides.

Additional Information1. 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? Number of Intersections 8. Posted Speed Limit (mph) 9. Average Daily Traffic ([See Instructions](#))

ADT (Major Road)

ADT (Minor Road)

Year Collected

APPLICATION FORM FOR**CYCLE 8 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)****II. Narrative Questions (See Instructions)**

These narrative questions are intended to provide additional project details for the application reviewers and project files. The reviewers will use the information in their "fatal flaw" assessment of the applications. Please make sure that:

- 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 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 reviewers may conclude that the application includes "fatal flaws" and the application will be dropped from further funding considerations. The applicant will not be notified of 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)

Collision rates have decreased over the past five years due to safety improvements in the project study area within Downtown Oakland, however there are several locations that remain a concern and have potential for further improvement. A data-driven evaluation of the five-year crash history in the City of Oakland was able to identify several corridors with high crash rates and a concentration of crashes along adjacent intersections. The project study area represents one such area with a need for safety improvements and roughly bounds Oakland Chinatown. Pedestrian volumes are moderate to high on Webster Street between 7th Street and 10th Street, Franklin Street between 8th Street and 9th Street, and 8th Street between Webster Street and Franklin Street during the peak period between 11 AM and 2 PM. Also, there is heavy traffic along Webster Street and 7th Street due to trips to and from the City of Alameda. Furthermore, the prevalent one-way street pattern in Oakland Chinatown leads to drivers circling block to find parking or reach their destination, causing delays at many of the study intersections. Under existing conditions, pole mounted signal heads with smaller 8" heads from old standards are prevalent in the area. The location of the pole-mounted smaller heads can cause lower motorist visibility, especially on one-way streets with more than 3 lanes in one direction. Additionally, lack of full vehicle and bicycle detection along Broadway leads to lower efficiency which can cause stop and go travel and higher delays during peak hours which is conducive to unsafe driving conditions. An initial analysis of the crash data between 2011 and 2015 shows a significant number of crashes in the study intersections, including several crashes involving pedestrians and bicyclists, indicating the need for improved hardware specifically aimed at providing a consistent interaction at intersections for all modes as they travel through the study area.

2. Potential for Proposed Improvements to Address the Safety Issues

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.

(Limited to 5,000 characters)

Note: Safety improvements that do not have countermeasures and crash reduction factors identified in the Excel Benefit 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.

Between January 1, 2011 and December 31, 2015, 162 collisions occurred in the study area bounded by Broadway, 9th Street, Harrison Street, and 7th Street, also including the intersection of Harrison Street and 10th Street. Of these collisions, 26 involved pedestrians and bicyclists, representing about 16% of the total number of collisions. The majority were broadside, rear-end, and sideswipe collisions, and there were 58 injuries including 2 severe injuries but no fatalities. The significant portion of pedestrian and bicycle collisions can be attributed to the high pedestrian volumes, since a good number of crashes occur during the peak period between 11 AM and 2 PM, and to the heavy traffic during the morning and afternoon peak hours due to trips to and from the City of Alameda.

To reduce the potential for future collisions, a combination of two countermeasures were selected to improve signalized intersections within the study area. The study area was approached in a systemic manner based on improving the consistency of intersection geometry and signal hardware. The goal is to provide a consistent interaction with intersections for vehicles, bicycles, and pedestrians as they travel through the study area. The selected countermeasures address safety issues at a large number of locations and are cost-effective when applied across the study area.

The first countermeasure is improving signal hardware. An analysis of the crash data reveals that 83% of the collisions occurred during

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daylight, showing that improvements to signal heads, such as installing back plates to pole mounted vehicle heads where needed, may help improve daytime visibility by reducing glare. Additionally, the following improvements would improve visibility for drivers at intersections: replacing existing "No Turn" electronic signs that are no longer working, installing Internally Illuminated Street Name Signs (IISNS) for approaches, upgrading existing 8" vehicle heads to 12" vehicle heads, and ensuring the standard number of overhead vehicle heads needed for approaches. At Harrison Street and 7th Street, pedestrian heads do not have countdown timers, so this improvement is incorporated with this countermeasure to improve pedestrian and driver awareness of the pedestrian crossing phase. For pedestrians and bicyclists, some beneficial improvements would be to consistently provide pedestrian signals where needed and at appropriate locations, upgrading pedestrian push buttons to become audible where they are currently not, and making sure signal heads are fully actuated for bicyclists, pedestrians, and vehicles. Other improvements for intersections include minimizing the number of poles in a corner where appropriate, potentially by integrating existing street lights into the traffic signal system and updating controller cabinets. For intersections where mast arms are not wide enough, such as Harrison Street and 8th Street where mast arms only span one out of the three or four lanes, longer mast arms are proposed to be installed.

The second countermeasure is converting signal poles to signal mast arm poles. Currently, the intersections of Harrison Street at 9th Street and 10th Street have pole-mounted signal heads even though the streets are approximately 40 ft wide (3 lanes in both directions or in one direction for one-way street), which reduces the visibility of traffic signals for drivers and bicyclists. It is proposed that mast arm be installed to mount signal heads above the travel lanes. While conversion to mounting signal heads on mast arms are proposed, we do not want to span the entire intersection because several of the roads may potentially be converted to two-way travel in the near term. The improved visibility from mast arm mounted signal heads should help to decrease rear-end crashes and collisions with crossing pedestrians and bicycles.

3. Crash Data Evaluation

What is the source of the crash data? For each countermeasure, describe how the influence areas and the limits of the crash data were established 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)

Note: If the project includes multiple locations and multiple countermeasures, group the locations so that within each group, the same countermeasures apply to all locations and their crash data. Describe the location groups. (These location groups must be consistent with the grouping in using the Excel Benefit Calculator.)

The Collision Summary reports from the City of Oakland Traffic Engineering Department cover the most recent five years of collision data (January 1, 2011 to December 31, 2015). With major improvements to intersections in Oakland Chinatown arising from the Revive Chinatown study and completed in 2008, the number of collisions have reduced from previous years. The most recent five-year period of crash data is appropriate and relevant to assess the current safety of intersections in the study area.

The identified countermeasures relate to all crashes that occur at signalized intersections in the study area. Signal hardware improvement and converting signal arms to mast arms or replacing current mast arms with longer mast arms were applied throughout the study area as needed and to meet California MUTCD requirements.

4. Prior Attempts to Address the Safety Issue

List all other projects/countermeasures that have been (or are being) deployed at this location. Applicants must identify all federal funds that have been used or approved within or directly adjacent to the proposed project limits within the last 5 years. (HSIP funding cannot be used to construct the same general type of countermeasures within the same limits within 5 years to ensure agencies do not apply the same Crash Reduction Factors to the same crashes.)

For projects proposing high cost improvements/countermeasures such as shoulder widening and horizontal/vertical realignments, applicants must document that they have installed and monitored low-cost improvements which have not adequately addressed the safety issue ("incremental approach").

(Limited to 5,000 characters)

At Alice Street and 9th Street, larger stop signs were installed in 2014 after the fatality crash in 2013. At Alice and 10th Street, which is next to Franklin Elementary School, a new stop sign and white wheel stops were installed. Prior to these improvements made by the City

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of Oakland, major improvements were made arising from the Revive Chinatown study, including implementing pedestrian scrambles, installing pedestrian countdown signal heads, and installing corner bulb-outs at intersections. This was a project funded by the Livable Communities Grant by the Metropolitan Transportation Commission and completed in 2008.

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III. Project Cost Estimate**Important:** Please review Appendix A of the [Application Form Instructions](#) before you start this section.**1. Construction Cost**

The first step is to estimate the project construction cost by using the provided Excel template "Detailed Engineer's Estimate and Cost Breakdown by Countermeasure". Enter the results from the construction cost estimate below.

Total Construction Cost	<input type="text" value="\$450,400"/>	Maximum "HSIP/Total" Percentage (e.g. Enter 90 for 90%)	<input type="text" value="100"/>
Cost Breakdown (%) (e.g. enter 20 for 20%. Total is 100.)			
CM #1	<input type="text" value="65"/>	CM #2	<input type="text" value="35"/>
CM #3	<input type="text" value="0"/>	Other Safety-Related Costs	<input type="text" value="0"/>
		Non Safety-Related Costs	<input type="text" value="0"/>

2. Project Costs - All Phases

Then project costs of all phases must be accounted for, even if substantial elements of the overall project are to be funded by other sources.

Shaded fields are 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	<input type="text" value="22,000"/>	<input type="text" value="100"/> (%)	<input type="text" value="\$22,000"/>	<input type="text" value="\$0"/>
	PS&E	<input type="text" value="\$90,000"/>	<input type="text" value="100"/> (%)	<input type="text" value="\$90,000"/>	<input type="text" value="\$0"/>
	PE Subtotal	<input type="text" value="\$112,000"/>		<input type="text" value="\$112,000"/>	<input type="text" value="\$0"/>
<input type="checkbox"/> Agency does NOT request HSIP funds for PE Phase (automatically checked if PE - HSIP funds is \$0).					
Right of Way	Right of Way Engineering	<input type="text" value="\$0"/>	<input type="text" value="0"/> (%)	<input type="text" value="\$0"/>	<input type="text" value="\$0"/>
	Appraisals, Acquisitions & Utilities	<input type="text" value="\$0"/>	<input type="text" value="0"/> (%)	<input type="text" value="\$0"/>	<input type="text" value="\$0"/>
	ROW Subtotal	<input type="text" value="\$0"/>		<input type="text" value="\$0"/>	<input type="text" value="\$0"/>
Construction Engineering & Construction	Construction Engineering	<input type="text" value="\$67,000"/>	<input type="text" value="100"/> (%)	<input type="text" value="\$67,000"/>	<input type="text" value="\$0"/>
	Construction	<input type="text" value="\$450,400"/>	<input type="text" value="100"/> (%)	<input type="text" value="\$450,400"/>	<input type="text" value="\$0"/>
	(Read Only - From "1" above - "Total Construction Cost")				
	CON Subtotal	<input type="text" value="\$517,400"/>		<input type="text" value="\$517,400"/>	<input type="text" value="\$0"/>
Total Cost		<input type="text" value="\$629,400"/>	<input type="text" value="100"/> (%)	<input type="text" value="\$629,400"/>	<input type="text" value="\$0"/>

Click to Check Cost Estimate (See Notes in Instructions)

No errors have been found in the cost estimate.

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IV. Benefit/Cost Ratio Calculation**Important: Please review Appendix A of the Application Form Instructions before you start this section.**

This section is utilized to calculate the Benefit/Cost (B/C) Ratio (BCR) of the project. Prior to this calculation, applicants are required to complete the following:

1. Use the Excel "Detailed Engineer's Estimate and Cost Breakdown by Countermeasure" template and Section III (Project Cost Estimate) of this application form to complete the construction cost estimate and the overall project cost estimate; and
2. Use the Excel "Benefit Calculator" to calculate the benefits of the safety countermeasures (the final printouts of the benefit calculation results must be provided as one of the application attachments).

1. Project Cost

Read Only - From Section III (Project Cost Estimate)

Total Project Cost \$629,400

Cost Breakdown (%. Total is 100.)

CM #1 65 CM #2 35 CM #3 0 Other Safety-Related Costs 0 Non Safety-Related Costs 0 **Total: 100%**

2. Countermeasures and BenefitsEnter the Exact Data from the Excel "Benefit Calculator" Results

Crash Data Period: from 1/1/2011 to 12/31/2015

Number of Countermeasures Utilized (Max 3) 2

	Countermeasures	Life Benefit (\$)
#1	S2: Improve signal hardware: lenses, back-plates, mounting, size, and number	\$2,154,600
#2	S7: Convert signal to mast arm (from pedestal-mounted)	\$576,201
#3		

3. BCR Calculation

	Life Benefit	Expected Cost	Resulting BCR
Countermeasure #1	\$2,154,600	\$409,110	5.27
Countermeasure #2	\$576,201	\$220,290	2.62
Countermeasure #3		\$0	0.00
Project's Total (Overall)	\$2,730,801	\$629,400	4.34

(Project BCR Used in Ranking)

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V. 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:

01/01/2017

Time for agency to internally staff project and request PE authorization

4

Month(s)

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

2

Month(s)

Proposed PE Authorization Date:

07/02/2017

(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

1

Month(s)

Time to complete CEQA/NEPA studies/approvals

0

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

3

Month(s)

Other

0

Month(s)

Expected Completion Date for the PE Phase:

05/02/2018

Time for agency to request CON authorization

2

Month(s)

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

3

Month(s)

Proposed CON Authorization Date:

10/01/2018

(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

6

Month(s)

Time included for closing the CON contract

6

Month(s)

Other

0

Month(s)

Expected Completion Date for the CON Phase:

04/30/2020

Time to complete the project close-out process

1

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:

08/29/2020

(Close-Out Delivery Milestone)

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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(s) (**Required**)
- ☒ Collision Summary/Summaries (**Required**)
- ☒ Detailed Engineer's Estimate (**Required**)
- ☒ Excel Benefit Calculator Printout(s) (**Required**)
- ☐ Warrant studies (**Required when applicable**)
- ☐ Letter/email of Support from Caltrans (**Required when applicable**)
- ☐ Additional narration, documentation, letters of support, etc. (Optional)

ADA Notice

For individuals with sensory disabilities, this document is available in alternate formats. For alternate format information, contact the Forms Management Unit at (916) 445-1233, TTY 711, or write to Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

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Engineer's Checklist

Cycle 8 HSIP Application – Engineer's Checklist

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/Cost Ratio (BCR); allowing the application to be accurately ranked in the statewide selection process. Applications with errors in the supporting data for the BCR 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: PH
 - 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: PH
 - 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 BCR
 - 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 BCR
 - 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: PH

(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: PH
 - 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 BCR calculations must be: * Engineer's Initials: PH
 - 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 3 years and maximum 5 years of data

6. **Collision Diagram(s)** (Shown separately or combined) * **Engineer's Initials:** PH.
- 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 BCR 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
7. **Collision List(s)** (Shown separately or combined) * **Engineer's Initials:** PH.
- a. Totals for each Location and/or CM are shown with crashes segregated based on Crash Severity
 - b. If the List(s) includes crashes that were not appropriate to include in the project BCR calculations, these crashes must be crossed through or removed and not included in the totals
 - c. The totals shown match the totals shown in the Collision Diagram and Collision Summary
 - d. Each crash is only counted as one, even if there were multiple victims and/or vehicles involved
8. **Collision Data Summary/Summaries (HSIP Form in Excel)** * **Engineer's Initials:** PH.
- a. Totals for each Location are shown with crashes segregated based on Crash Severity
 - b. The totals for each Location/ match the totals shown in the Collision Diagram and Collision List
 - c. One Collision Data Summary is needed for each benefit calculation run. The totals at the bottom of the form match the totals in the Crash Data Table in the benefit calculation run.
9. **Detailed Engineer's Estimate (HSIP Form in Excel)** **Engineer's Initials:** PH.
- a. All likely construction costs associated with the project are identified and included in the estimate
 - b. 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
 - c. Costs for each item are distributed between CMs using a logical method to fairly calculate each CM's cost
 - d. Each CM included in the BCR calculation must represent a minimum of 15% of the construction costs *
 - e. "Other Safety" and "Non-Safety" construction items/costs are identified and properly accounted for
 - f. The total construction cost in the estimate must match the "Construction" cost in Section III of the application
10. **Benefit Results and Benefit Summary (Excel Benefit Calculator)** * **Engineer's Initials:** PH.
- a. Project locations are grouped appropriately per Appendix A of the application form instructions
 - b. For each of the benefit calculation run, the CMs and crash data shown match the totals shown in the corresponding Collision Data Summary
 - c. The calculation sheets from all benefit calculation runs must be signed by the Engineer in Responsible Charge and attached to the application
 - d. When multiple benefit calculation runs are utilized in a project, the results of all runs are summarized in the Benefit Summary sheet which is also attached to the application
11. **Benefit/Cost Ratio (BCR) Calculation (Section IV of the application form)** * **Engineer's Initials:** PH.
- a. The CMs, the crash data period and the benefits by CM shown match the output of the Excel Benefit Calculator / Benefit Summary sheet
 - b. The total project cost in the BCR calculation must match the total project cost in Section III of the application
12. **Warrant studies/guidance (Check if not applicable)** **Engineer's Initials:** PH.
- ☐ N/A 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.

13. Additional narration, documentation, letters of support:**Engineer's Initials:** PH

- a. 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 BCR
- b. When needed, clarify non-standard application of countermeasures, crashes and/or costs; appropriate documentation is attached to the application to document the engineering decisions and calculations


** Not required if the project is applying for set-aside funds.*

Licensed Engineer:

Name: Philip Ho

Title: Transportation Engineer

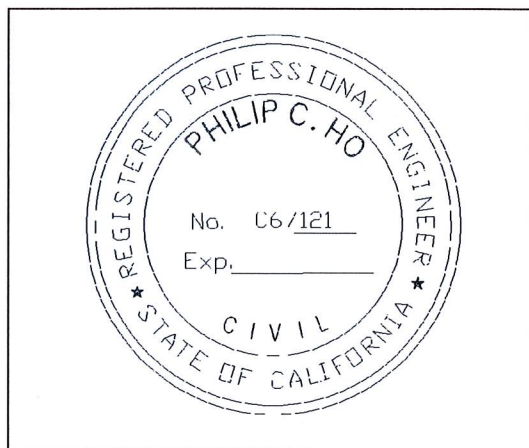
Engineer License Number C67121

Signature: 

Date: August 1, 2016

Email: pho@oaklandnet.com

Phone: (510) 238-6256

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 per 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: Wladimir Wlassowsky

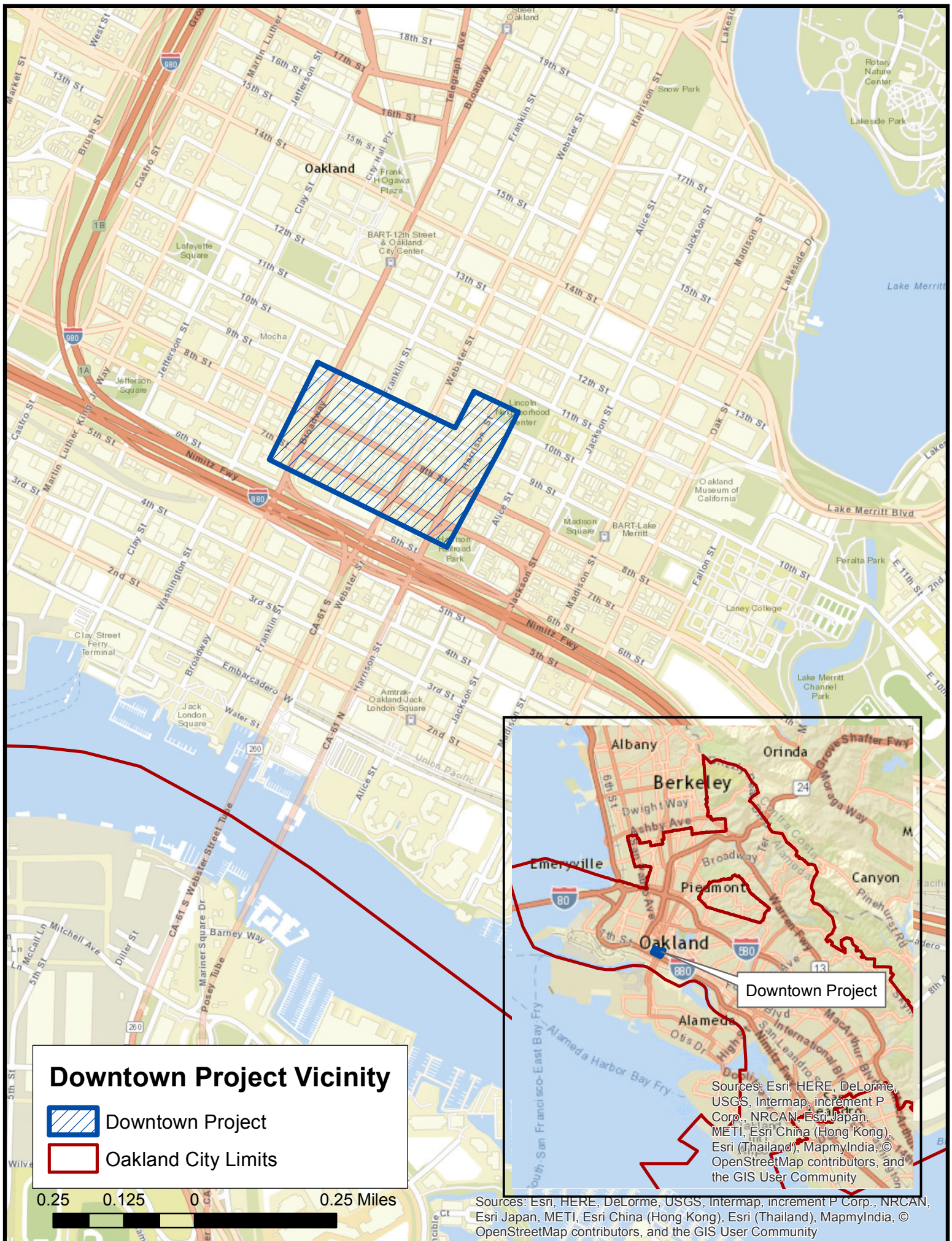
Title: Transportation Services Division Manager

Signature: 



Date: August 12, 2016

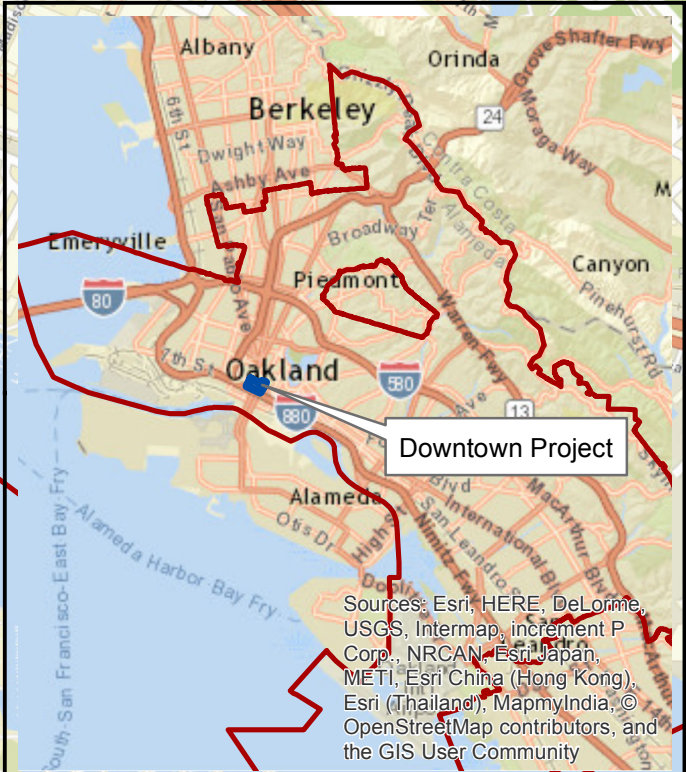
04-Oakland-5

Vicinity Map



Downtown Project Vicinity

-  Downtown Project
-  Oakland City Limits



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

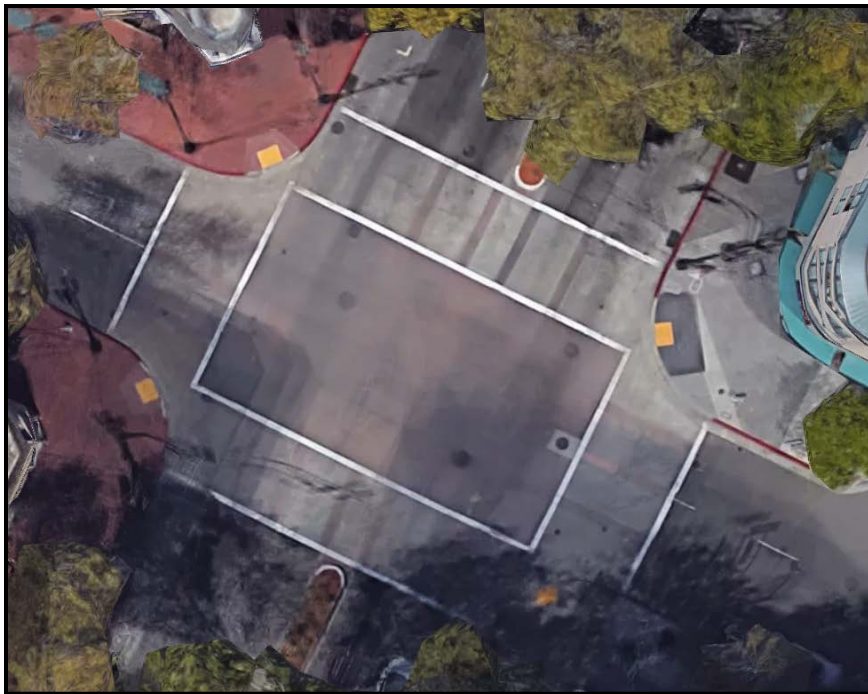
04-Oakland-5

Project Maps and Plans

Sorted by Intersection



Existing



Proposed



Improvements

- PS Pedestrian speaker
- PPB Pedestrian push button
- U Upgrade controller cabinet
- M Add mast arm pole
- 12" Convert signal head to 12"
- BP Add back plate to signal head
- VA Add video actuation
- ISNS Illuminated street name sign
- O Add overhead vehicle signal head
- ▼ CR Replace curb ramp
- ▲ PH Add countdown pedestrian signal head

Existing



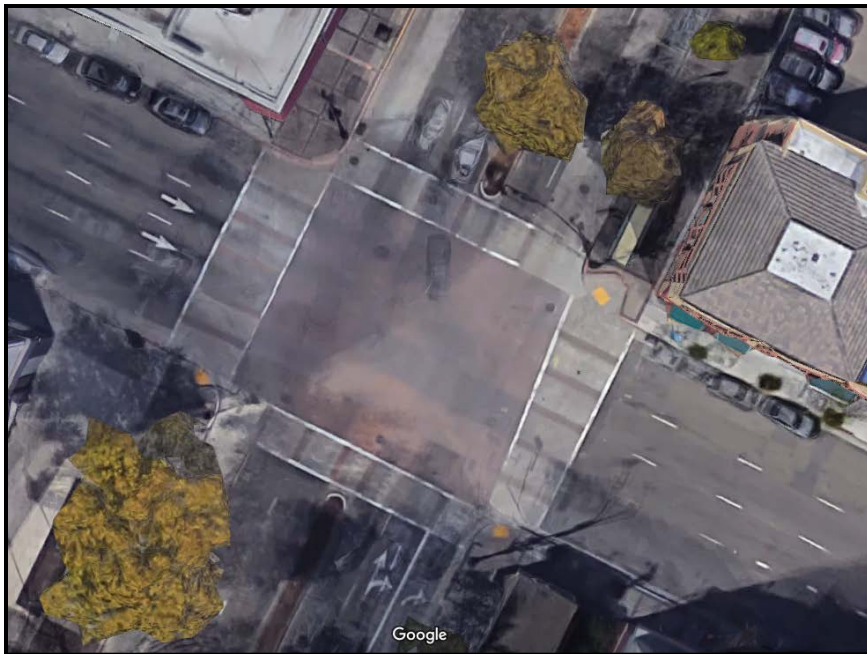
Proposed



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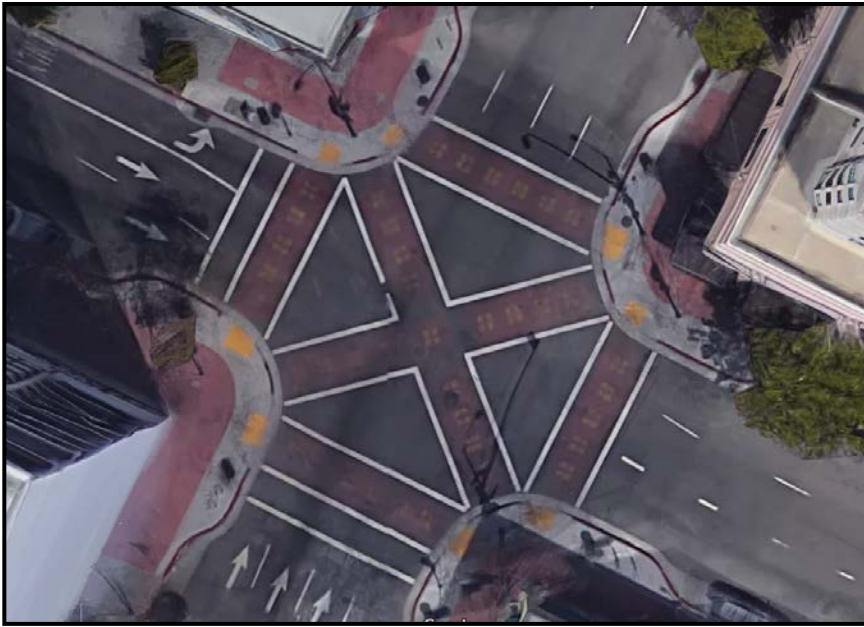
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Existing



Proposed



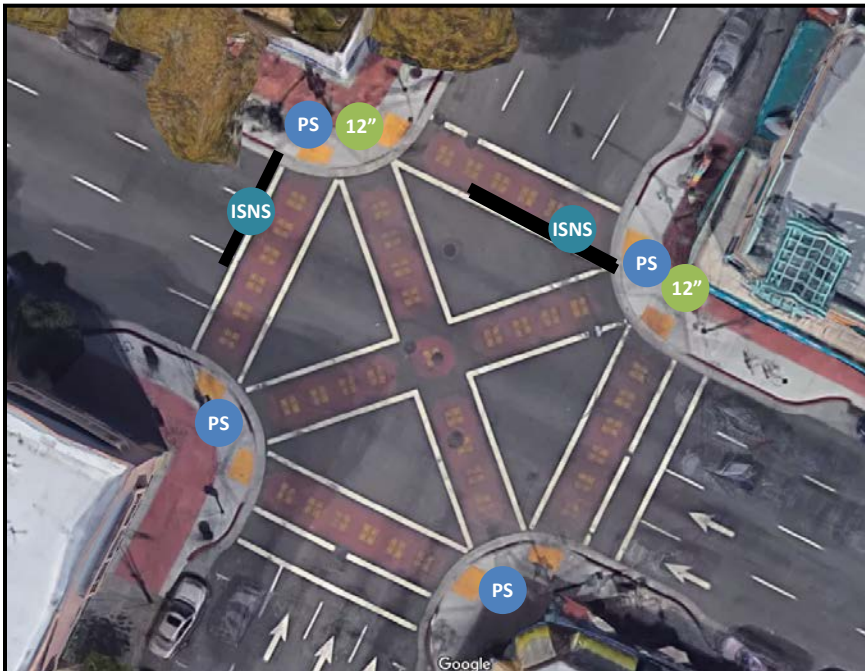
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Existing



Proposed



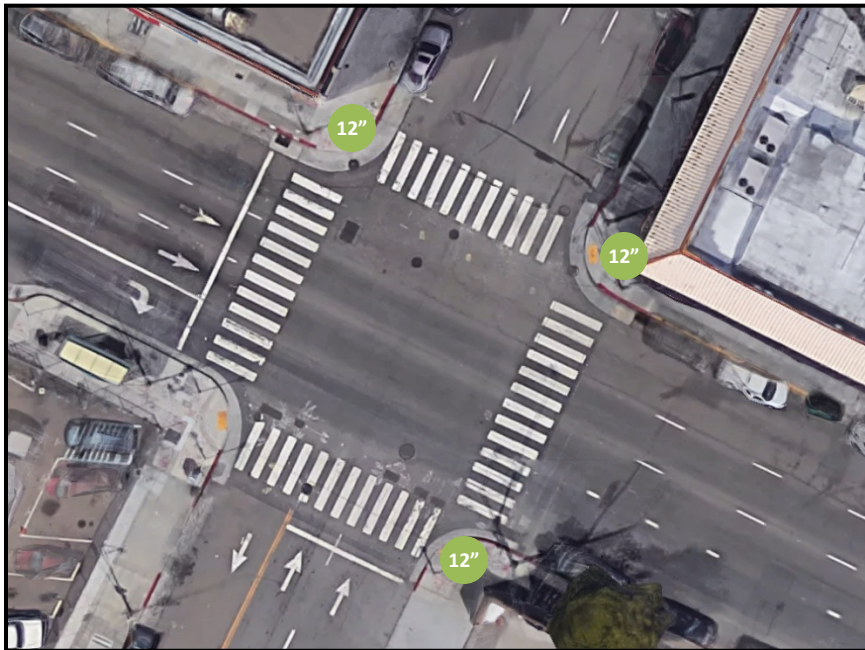
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Existing



Proposed



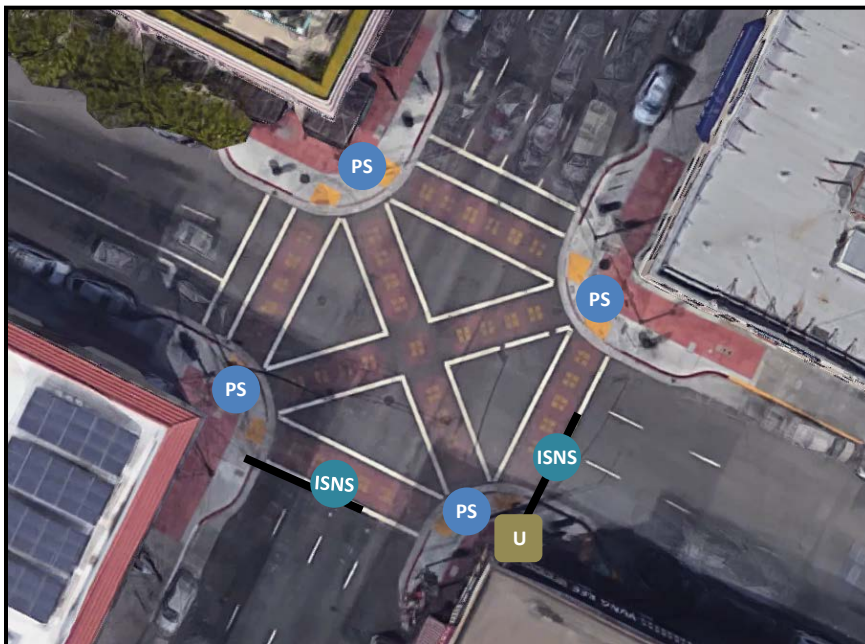
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Existing



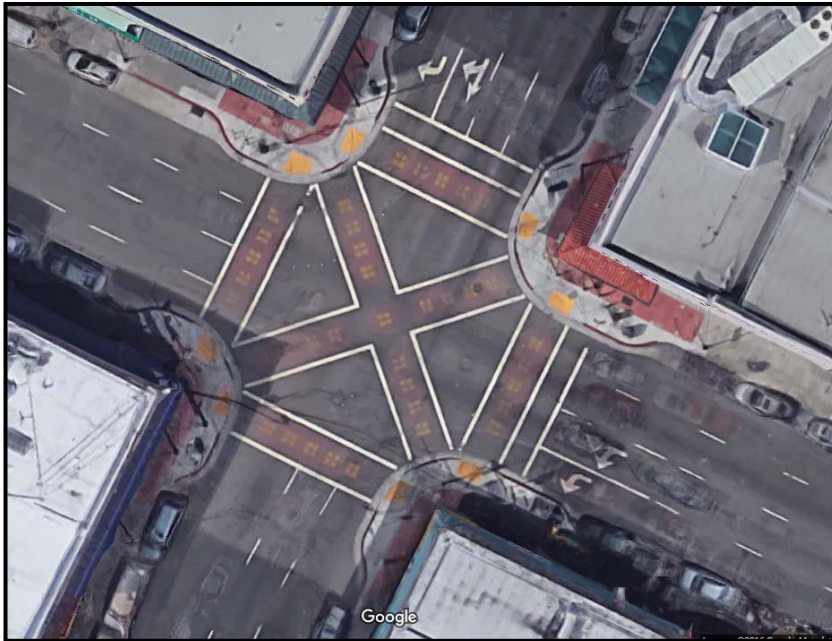
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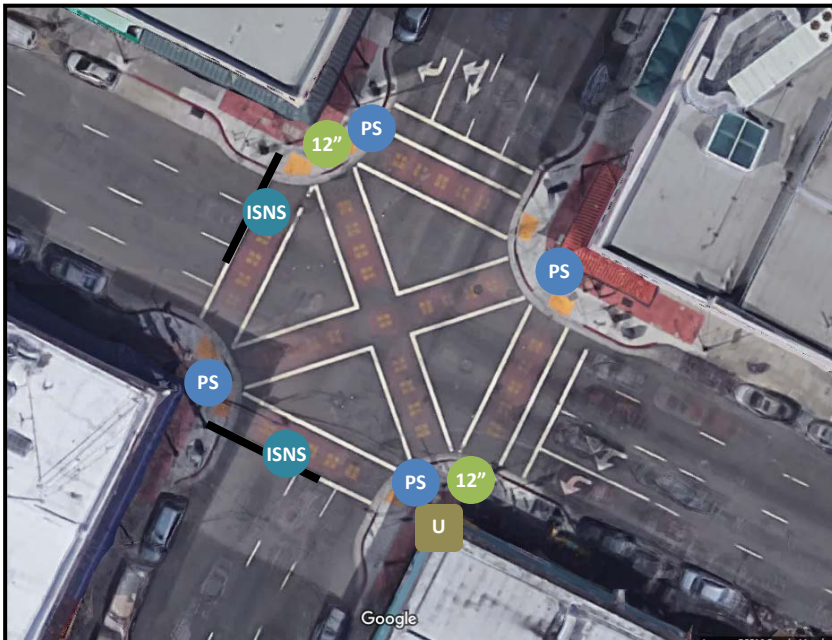
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Existing



Proposed



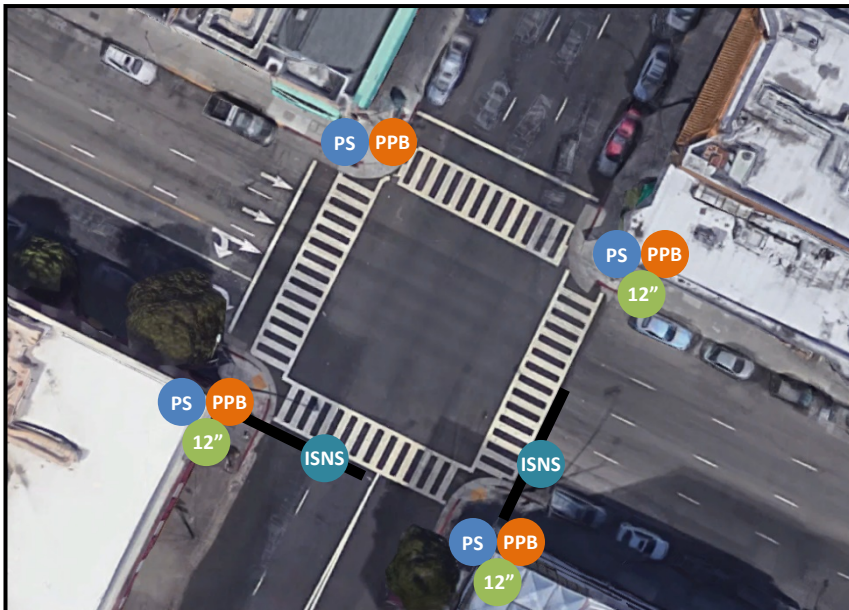
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Proposed



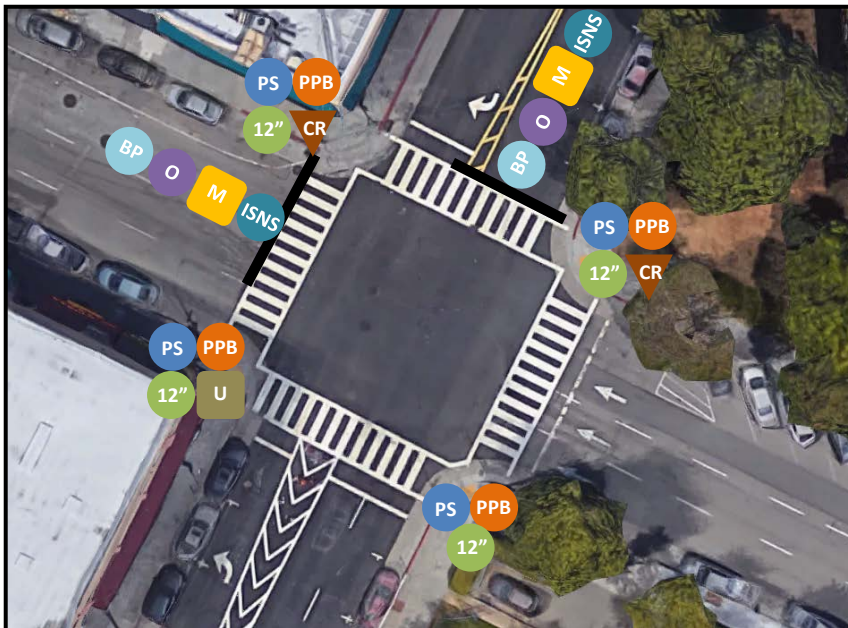
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Existing



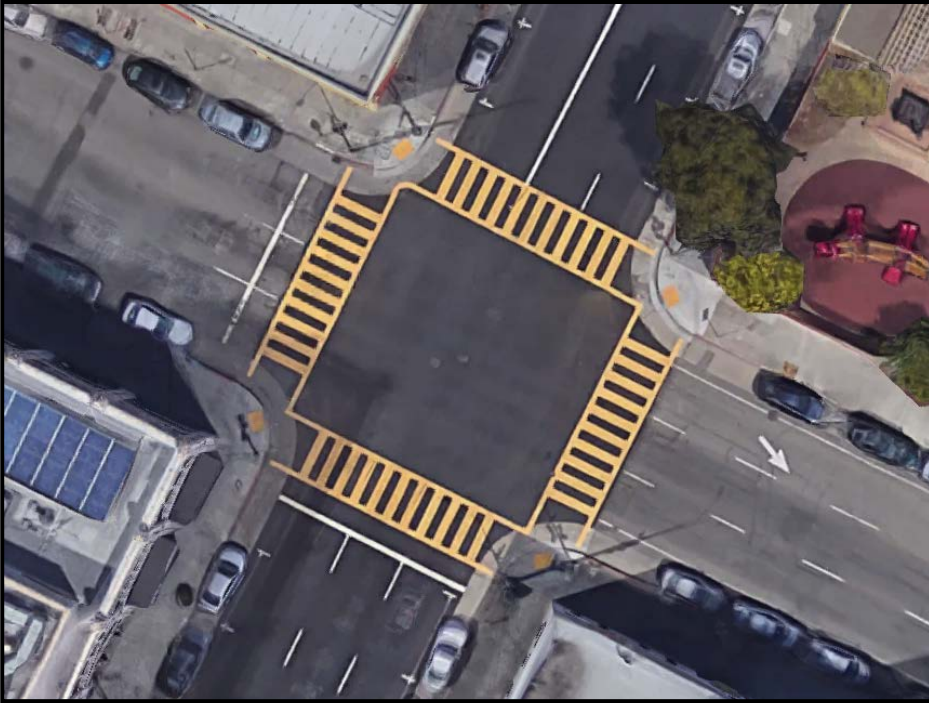
Proposed



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Existing



Proposed



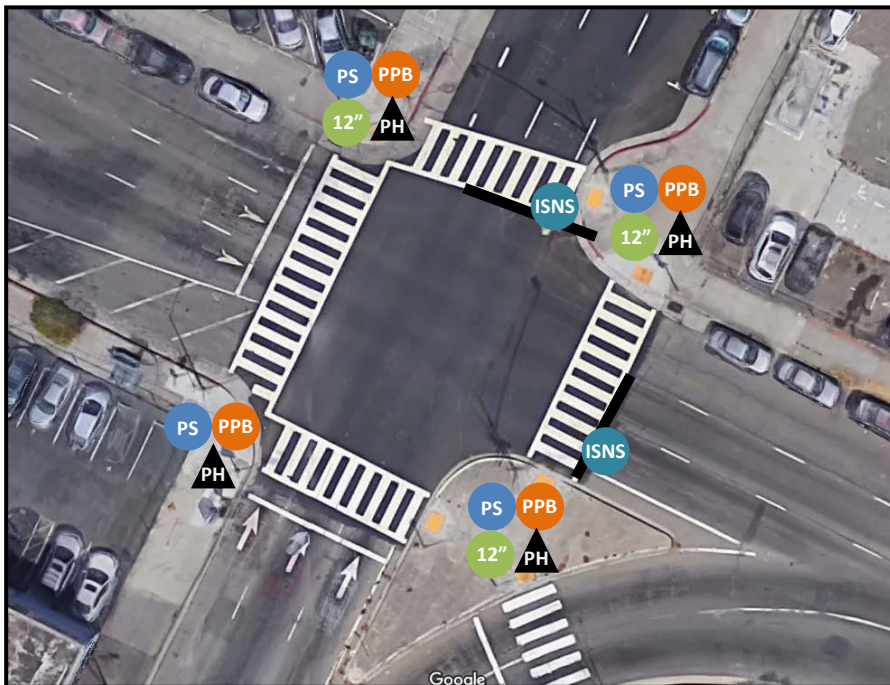
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04-Oakland-5

Pictures of Existing Conditions

Sorted by Intersection



























04-Oakland-5

Collision Diagrams

Sorted By Intersection

Color Legend - Highest Degree of Injury

Maroon = Fatal

Purple = Severe Injury

Green = Other Visible Injury

Teal = Complaint of Pain

Dark Blue = Property Damage Only

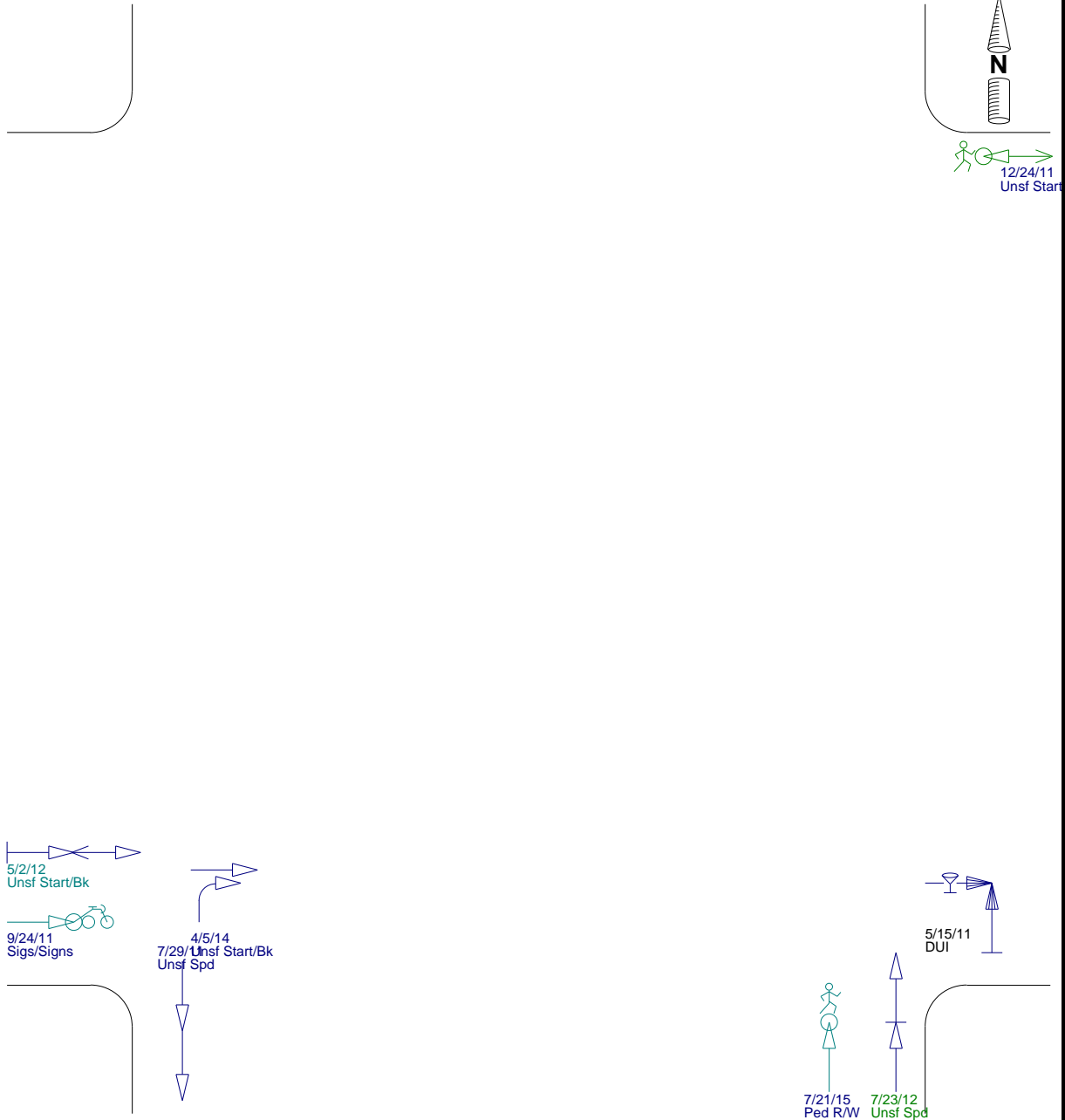
Collision Diagram

Horizontal Street: 9TH ST

Vertical Street: BROADWAY

From: 1/1/2011 To: 12/31/2015

Date Prepared: 7/21/2016



Number of Collisions

5 Property Damage Only
3 Injury Collisions
0 Fatal Collisions
8 Total Collisions

Legend

Moving Vehicle
 Stopped Vehicle
 Backing Vehicle
 Ran Off Road
 Movement Unknown

Right Turn
 Left Turn
 Sideswipe
 Day
 Night

Pedestrian
 Fixed Object
 Bicycle
 DUI
 Injury
 Fatal

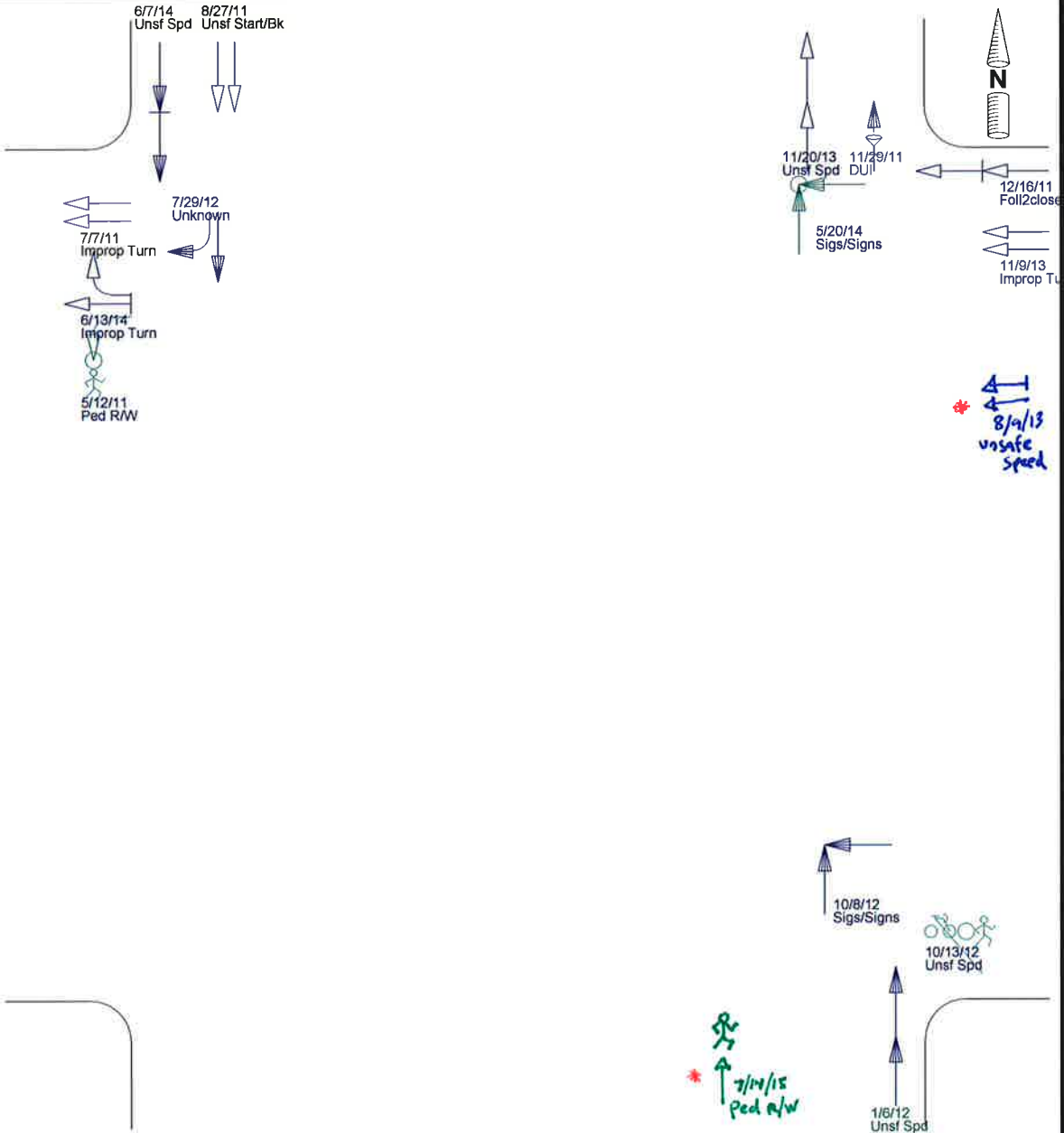
Collision Diagram

Horizontal Street: 8TH ST

Vertical Street: BROADWAY

From: 1/1/2011 To: 12/31/2015

Date Prepared: 7/21/2016



Number of Collisions

- 11** Property Damage Only
- 3** Injury Collisions
- 0** Fatal Collisions
- 14** Total Collisions

Legend

- ➡ Moving Vehicle
- ➡ Stopped Vehicle
- ➡ Backing Vehicle
- ➡ Ran Off Road
- ➡ Movement Unknown
- ➡ Right Turn
- ➡ Left Turn
- ➡ Sideswipe
- ➡ Day
- ➡ Night

- ➡ Pedestrian
- ➡ Fixed Object
- ➡ Bicycle
- ➡ DUI
- ➡ Injury
- ➡ Fatal

* Distance of crash from intersection
is between 100' and 250'

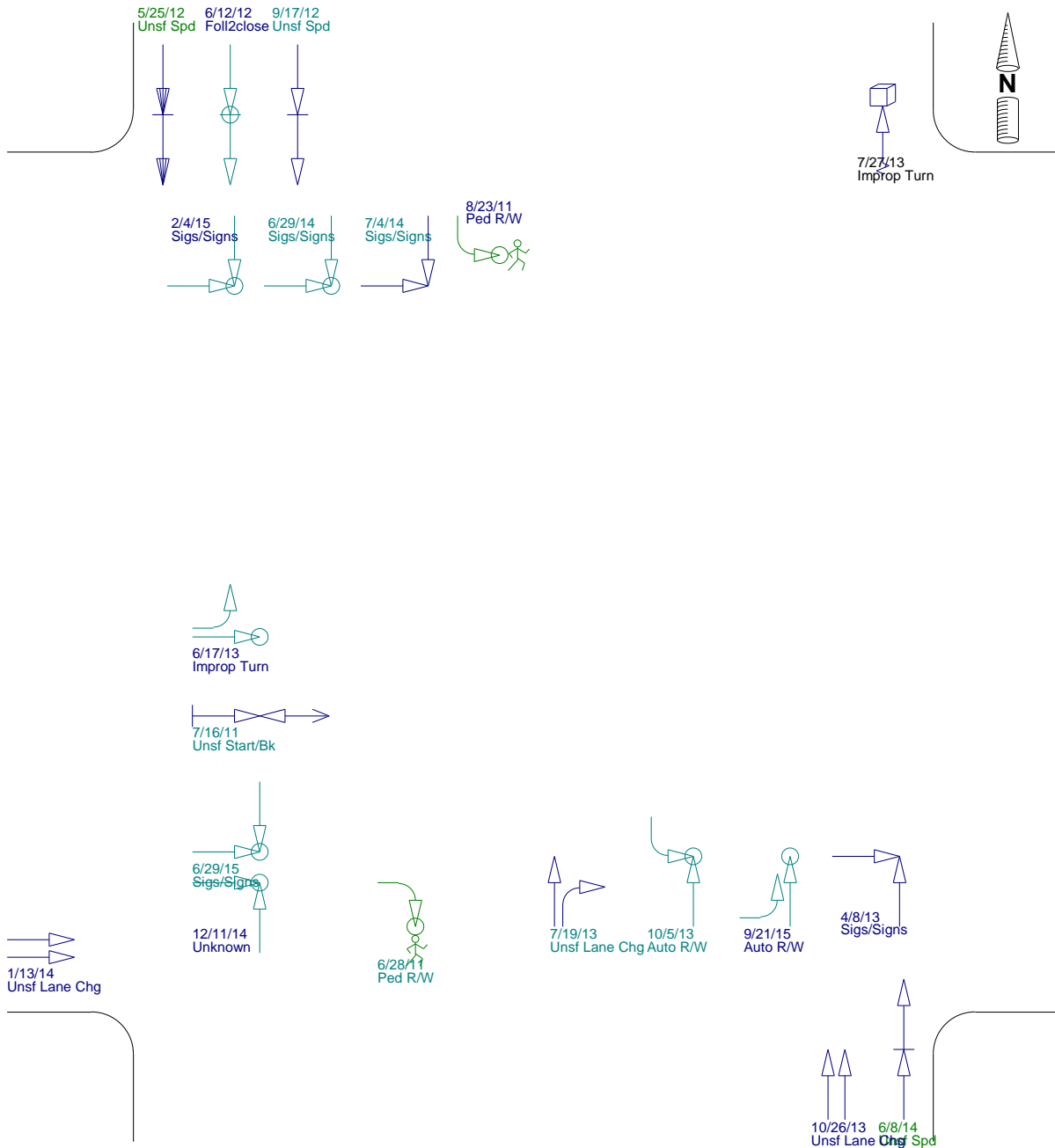
Collision Diagram

Horizontal Street: 7TH ST

Vertical Street: BROADWAY

From: 1/1/2011 To: 12/31/2015

Date Prepared: 7/21/2016



Number of Collisions

10 Property Damage Only
10 Injury Collisions
0 Fatal Collisions
20 Total Collisions

Legend

Moving Vehicle
 Stopped Vehicle
 Backing Vehicle
 Ran Off Road
 Movement Unknown

Right Turn
 Left Turn
 Sideswipe
 Day
 Night

Pedestrian
 Fixed Object
 Bicycle
 DUI
 Injury
 Fatal

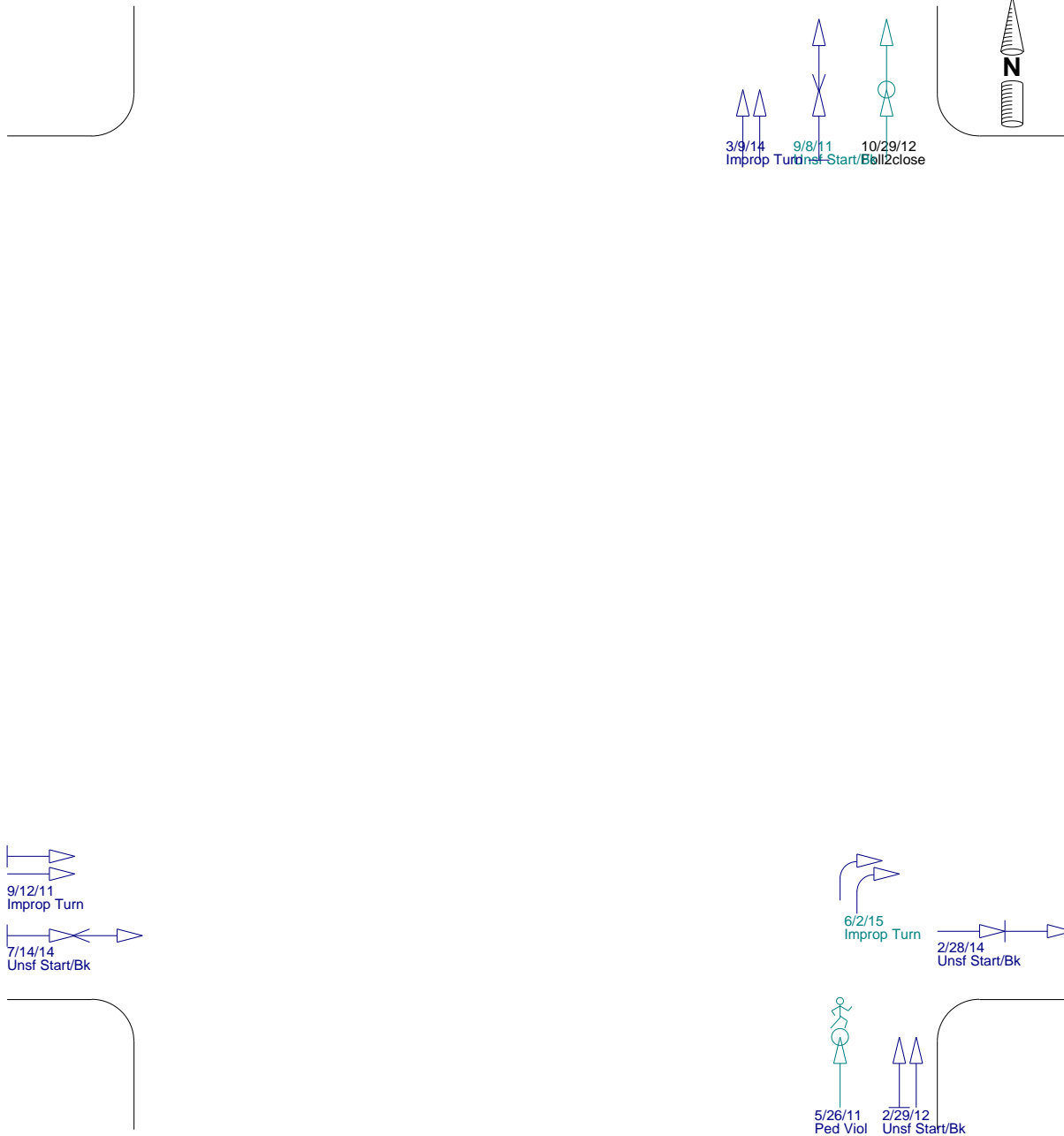
Collision Diagram

Horizontal Street: 9TH ST

Vertical Street: FRANKLIN ST

From: 1/1/2011 To: 12/31/2015

Date Prepared: 7/21/2016



Number of Collisions

8 Property Damage Only

2 Injury Collisions

0 Fatal Collisions

10 Total Collisions

Collisions Not Plotted: 1

Legend

- ➡ Moving Vehicle
- ➡ Stopped Vehicle
- ➡ Backing Vehicle
- ➡ Ran Off Road
- ➡ Movement Unknown

- ↪ Right Turn
- ↩ Left Turn
- ↔ Sideswipe
- ☐ Day
- ☐ Night

- 🚶 Pedestrian
- 🚗 Fixed Object
- 🚲 Bicycle
- 🍷 DUI
- Injury
- ⊙ Fatal

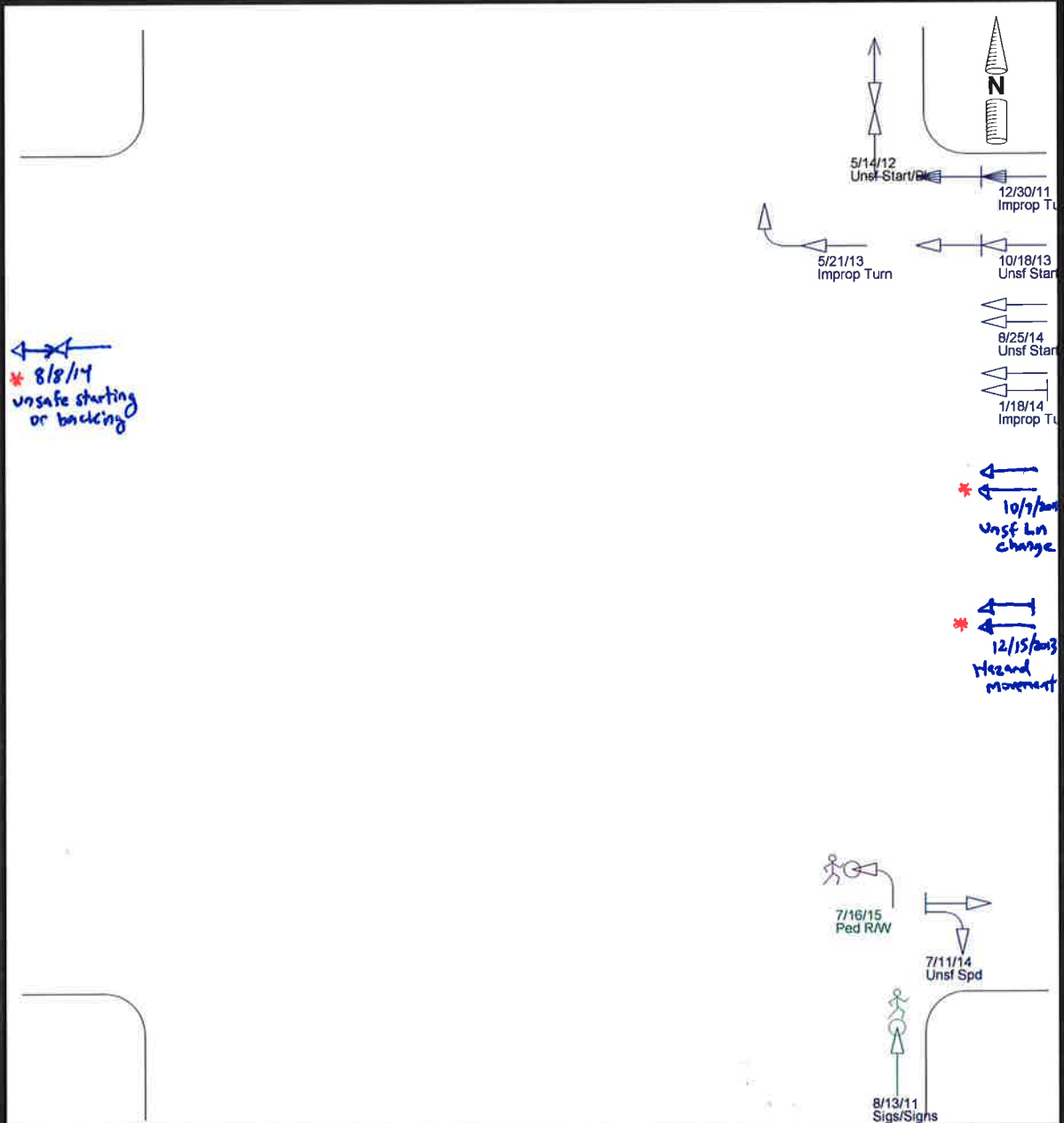
Collision Diagram

Horizontal Street: 8TH ST

Vertical Street: FRANKLIN ST

From: 1/1/2011 To: 12/31/2015

Date Prepared: 7/21/2016



Number of Collisions

- 7 Property Damage Only
- 2 Injury Collisions
- 0 Fatal Collisions
- 9 Total Collisions

Legend

- Moving Vehicle
- Stopped Vehicle
- Backing Vehicle
- Ran Off Road
- Movement Unknown

- Right Turn
- Left Turn
- Sideswipe
- Day
- Night

- Pedestrian
- Fixed Object
- Bicycle
- DUI
- Injury
- Fatal

* Distance of crash from intersection
is between 100' and 250'

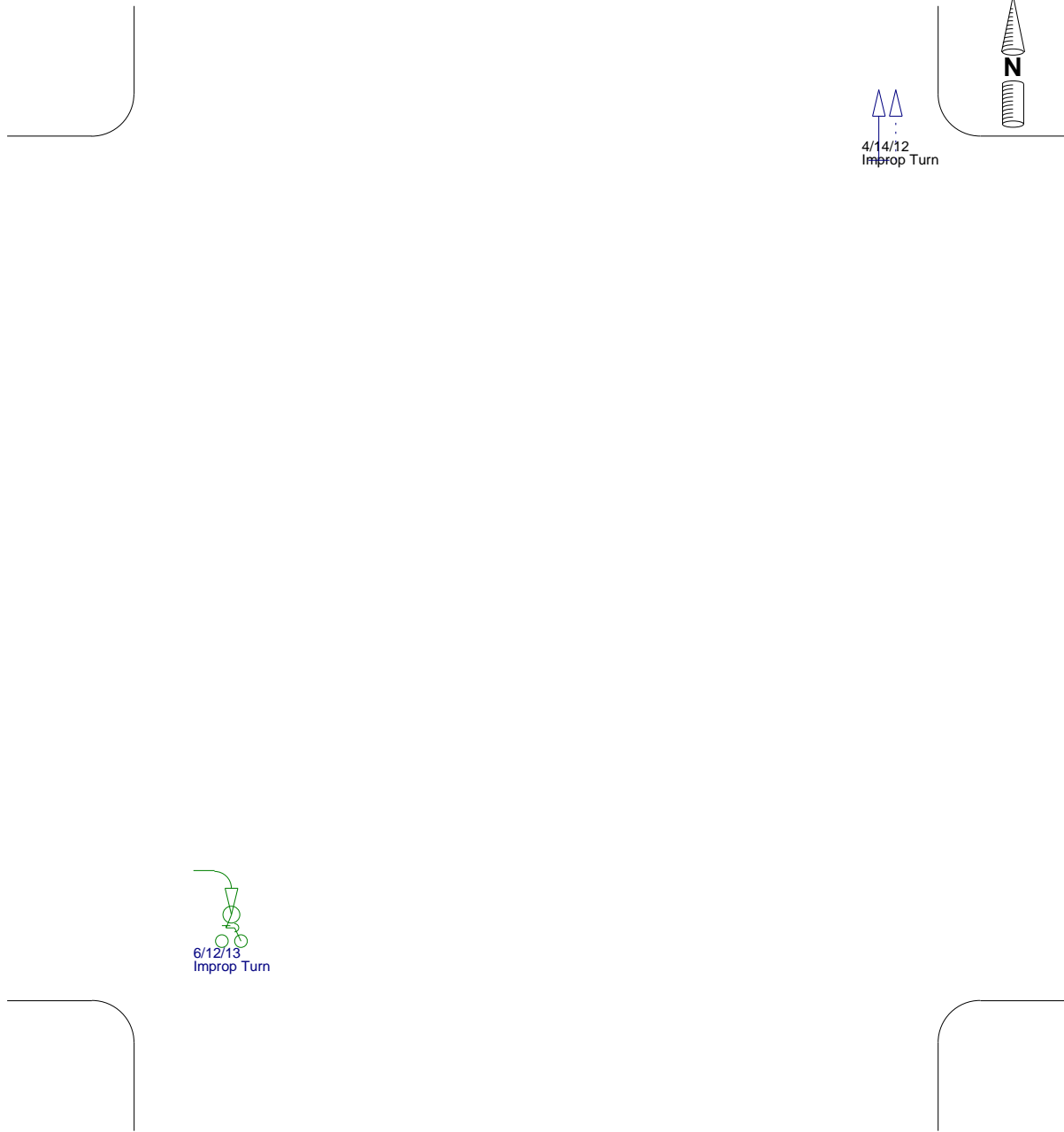
Collision Diagram

Horizontal Street: 7TH ST

Vertical Street: FRANKLIN ST

From: 1/1/2011 To: 12/31/2015

Date Prepared: 7/21/2016



Number of Collisions

- 1 Property Damage Only
- 1 Injury Collisions
- 0 Fatal Collisions
- 2 Total Collisions

Legend

- ← Moving Vehicle
- ←| Stopped Vehicle
- ←→ Backing Vehicle
- ←~ Ran Off Road
- ←..... Movement Unknown

- ↗ Right Turn
- ↖ Left Turn
- ← Sideswipe
- △ Day
- ◐ Night

- 🚶 Pedestrian
- 📦 Fixed Object
- 🚲 Bicycle
- 🍷 DUI
- Injury
- ⊙ Fatal

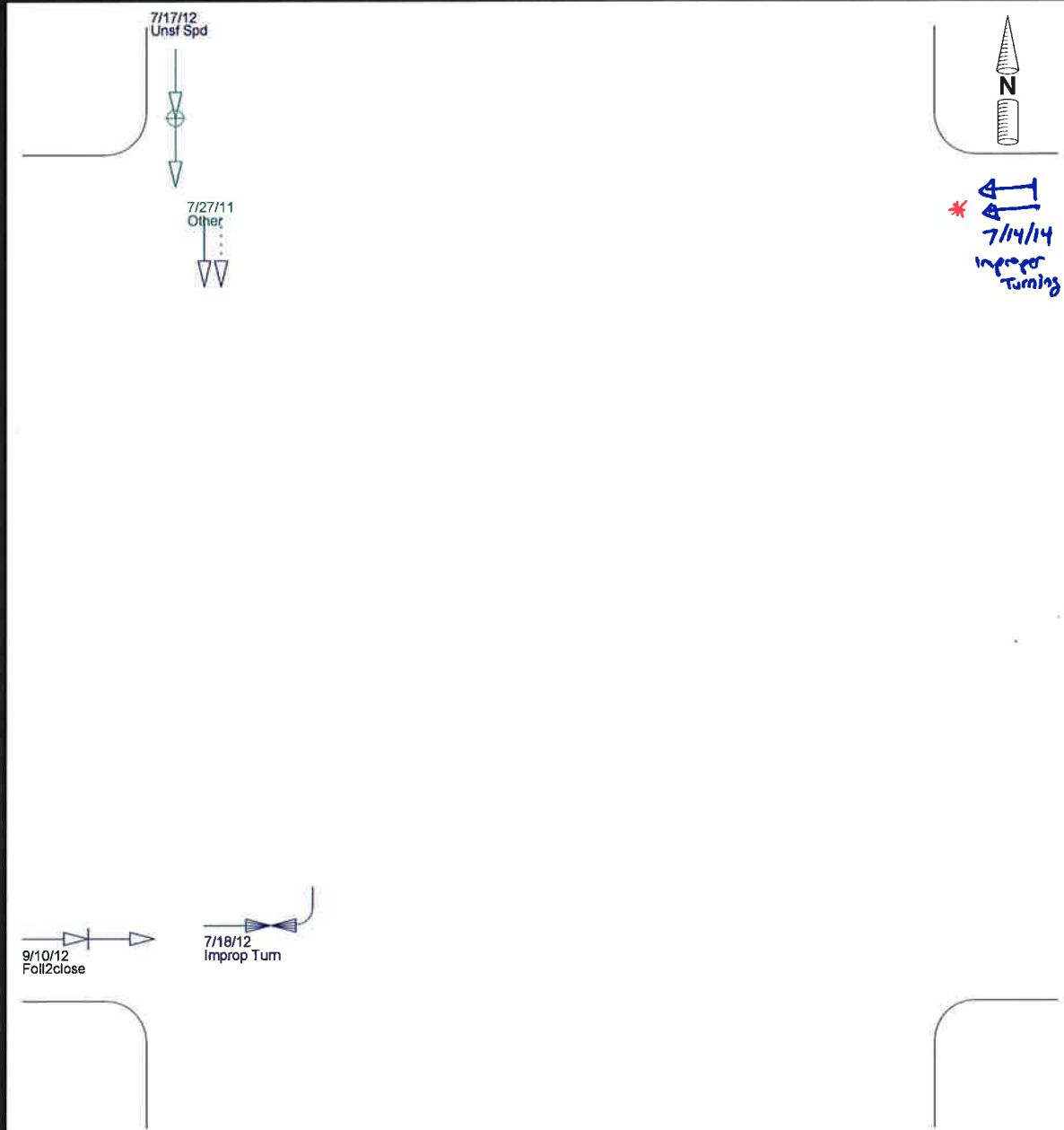
Collision Diagram

Horizontal Street: 9TH ST

From: 1/1/2011 To: 12/31/2015

Vertical Street: WEBSTER ST

Date Prepared: 7/21/2016



Number of Collisions

- 3 Property Damage Only
- 1 Injury Collisions
- 0 Fatal Collisions
- 4 Total Collisions

Legend

- ➡ Moving Vehicle
- ➡ Stopped Vehicle
- ➡ Backing Vehicle
- ➡ Ran Off Road
- ➡ Movement Unknown

- ↗ Right Turn
- ↖ Left Turn
- ↔ Sideswipe
- ☐ Day
- ☐ Night

- 🚶 Pedestrian
- 📦 Fixed Object
- 🚲 Bicycle
- 🍷 DUI
- 👤 Injury
- ☠ Fatal

* Distance of crash from intersection
is between 100' and 250'

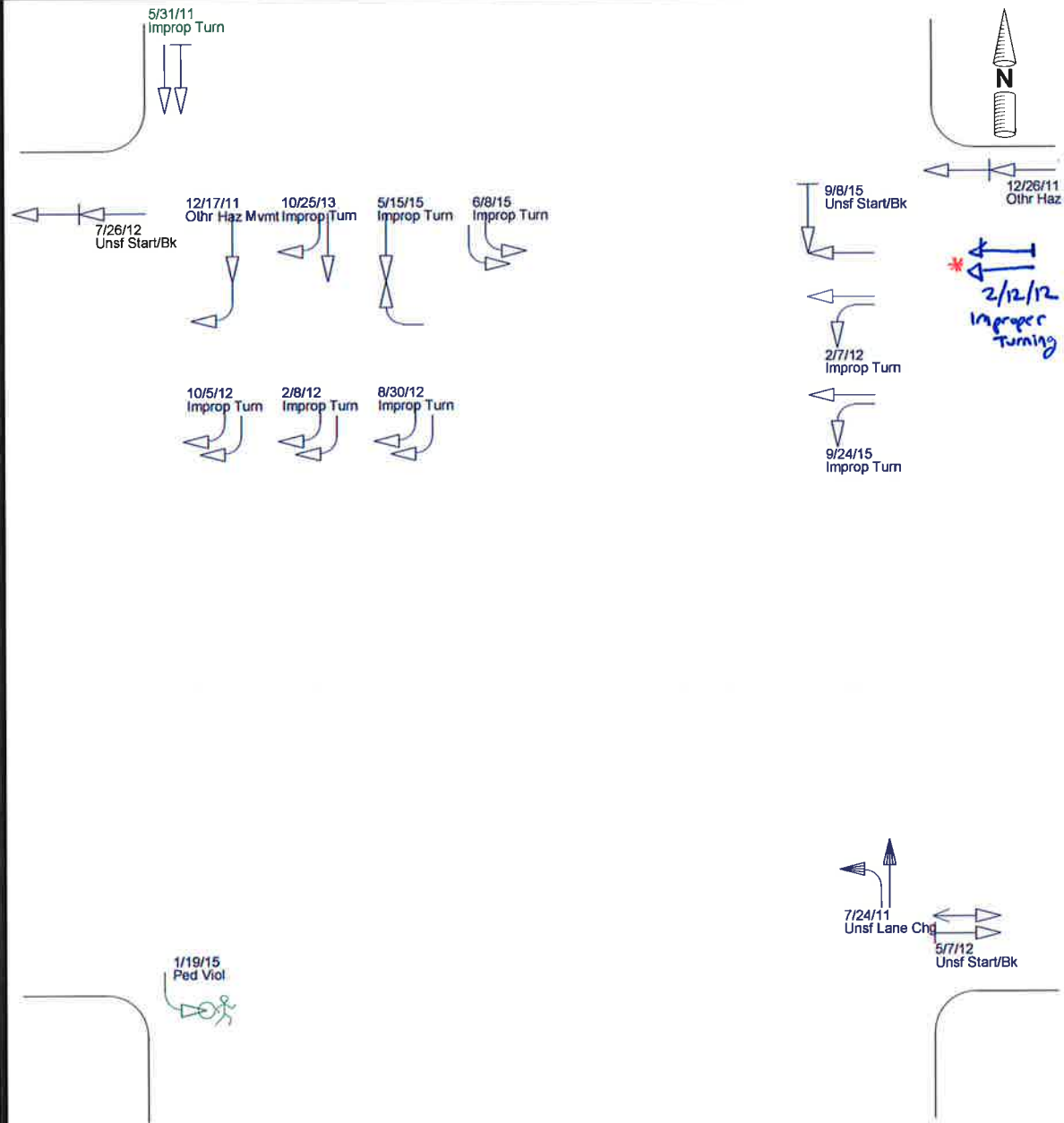
Collision Diagram

Horizontal Street: 8TH ST

From: 1/1/2011 To: 12/31/2015

Vertical Street: WEBSTER ST

Date Prepared: 7/21/2016



Number of Collisions

- 15** Property Damage Only
- 1** Injury Collisions
- 0** Fatal Collisions
- 16** Total Collisions

Legend

- ➡ Moving Vehicle
- ⏹ Stopped Vehicle
- ➡➡ Backing Vehicle
- ➡~ Ran Off Road
- ➡..... Movement Unknown
- ↶ Right Turn
- ↷ Left Turn
- ➡➡ Sideswipe
- ➡ Day
- ➡ Night

- 🚶 Pedestrian
- 📦 Fixed Object
- 🚲 Bicycle
- 🍷 DUI
- 👤 Injury
- ☠ Fatal

* Distance of crash from intersection is between 100' and 250'

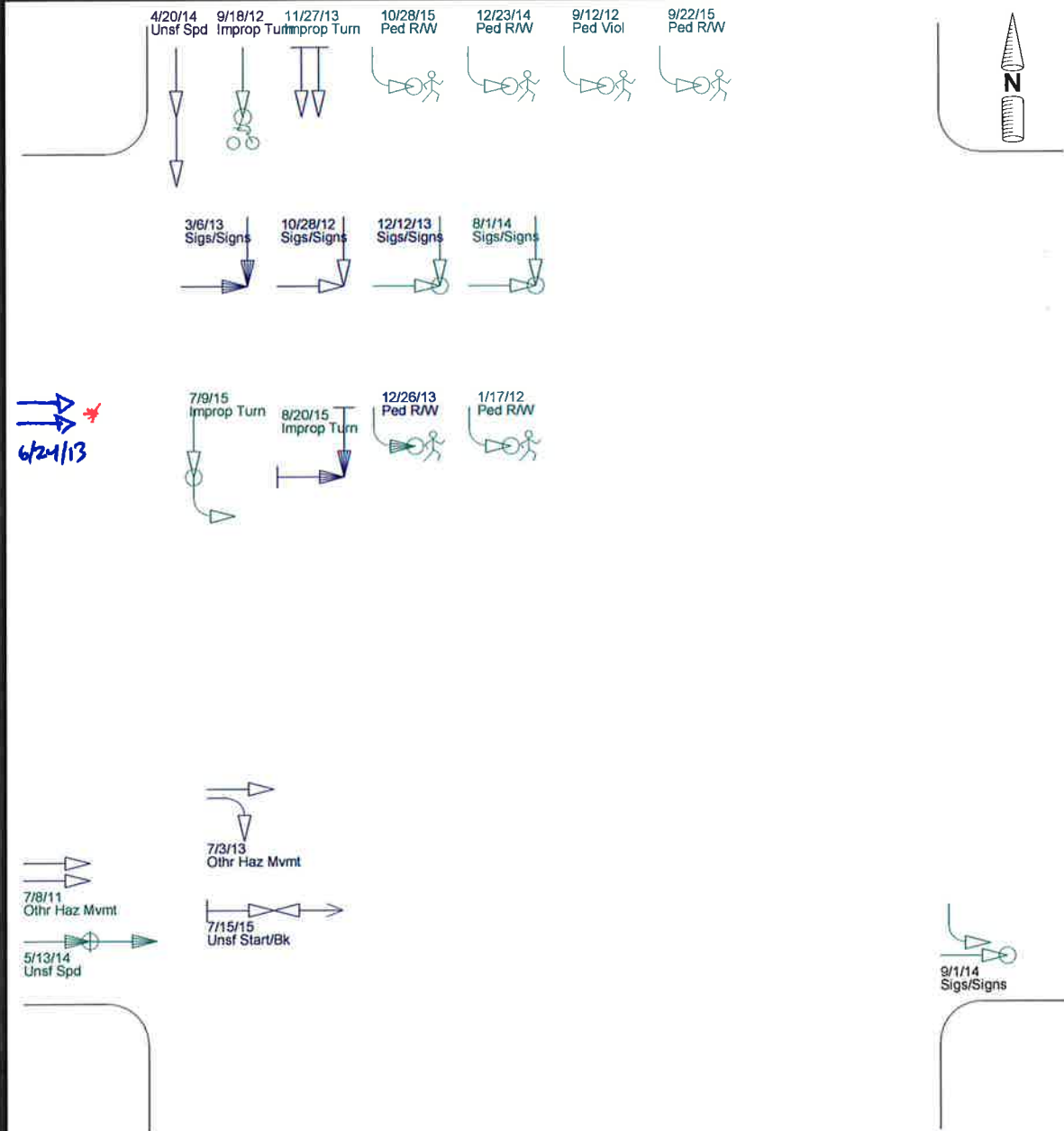
Collision Diagram

Horizontal Street: 7TH ST

From: 1/1/2011 To: 12/31/2015

Vertical Street: WEBSTER ST

Date Prepared: 7/21/2016



Number of Collisions

- 8** Property Damage Only
- 12** Injury Collisions
- 0** Fatal Collisions
- 20** Total Collisions

Legend

- Moving Vehicle
- Stopped Vehicle
- Backing Vehicle
- Ran Off Road
- Movement Unknown

- Right Turn
- Left Turn
- Sideswipe
- Day
- Night

- Pedestrian
- Fixed Object
- Bicycle
- DUI
- Injury
- Fatal

* Distance of crash from intersection
is between 100' and 250'

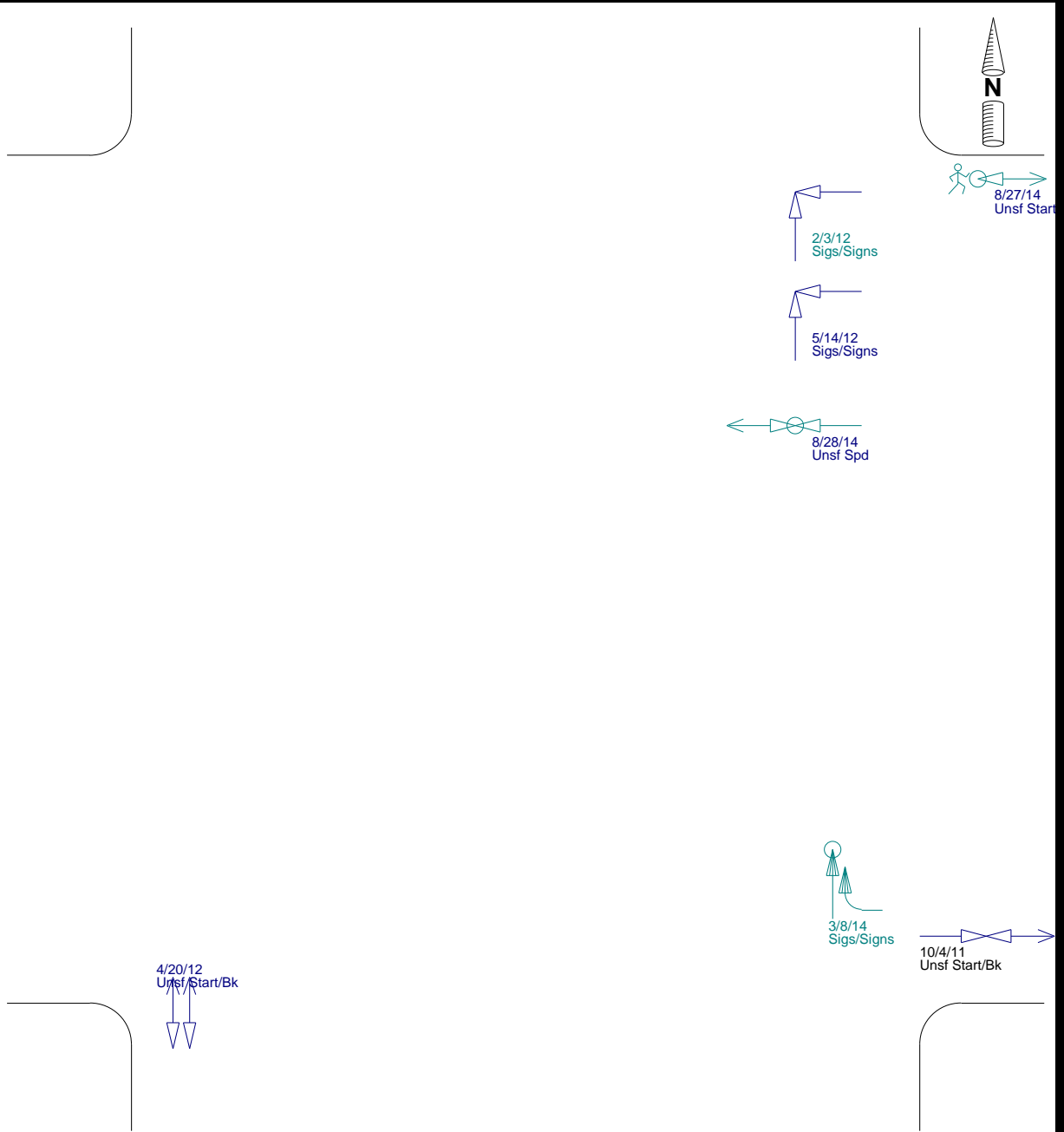
Collision Diagram

Horizontal Street: 10TH ST

Vertical Street: HARRISON ST

From: 1/1/2011 To: 12/31/2015

Date Prepared: 7/21/2016



Number of Collisions

- 4** Property Damage Only
- 3** Injury Collisions
- 0** Fatal Collisions
- 7** Total Collisions

Legend

- ◀ Moving Vehicle
- ◀| Stopped Vehicle
- ◀→ Backing Vehicle
- ◀~ Ran Off Road
- ◀..... Movement Unknown

- ↗ Right Turn
- ↖ Left Turn
- ↔ Sideswipe
- ◀ Day
- ◀ Night

- 🚶 Pedestrian
- 📦 Fixed Object
- 🚲 Bicycle
- 🍷 DUI
- Injury
- ⊙ Fatal

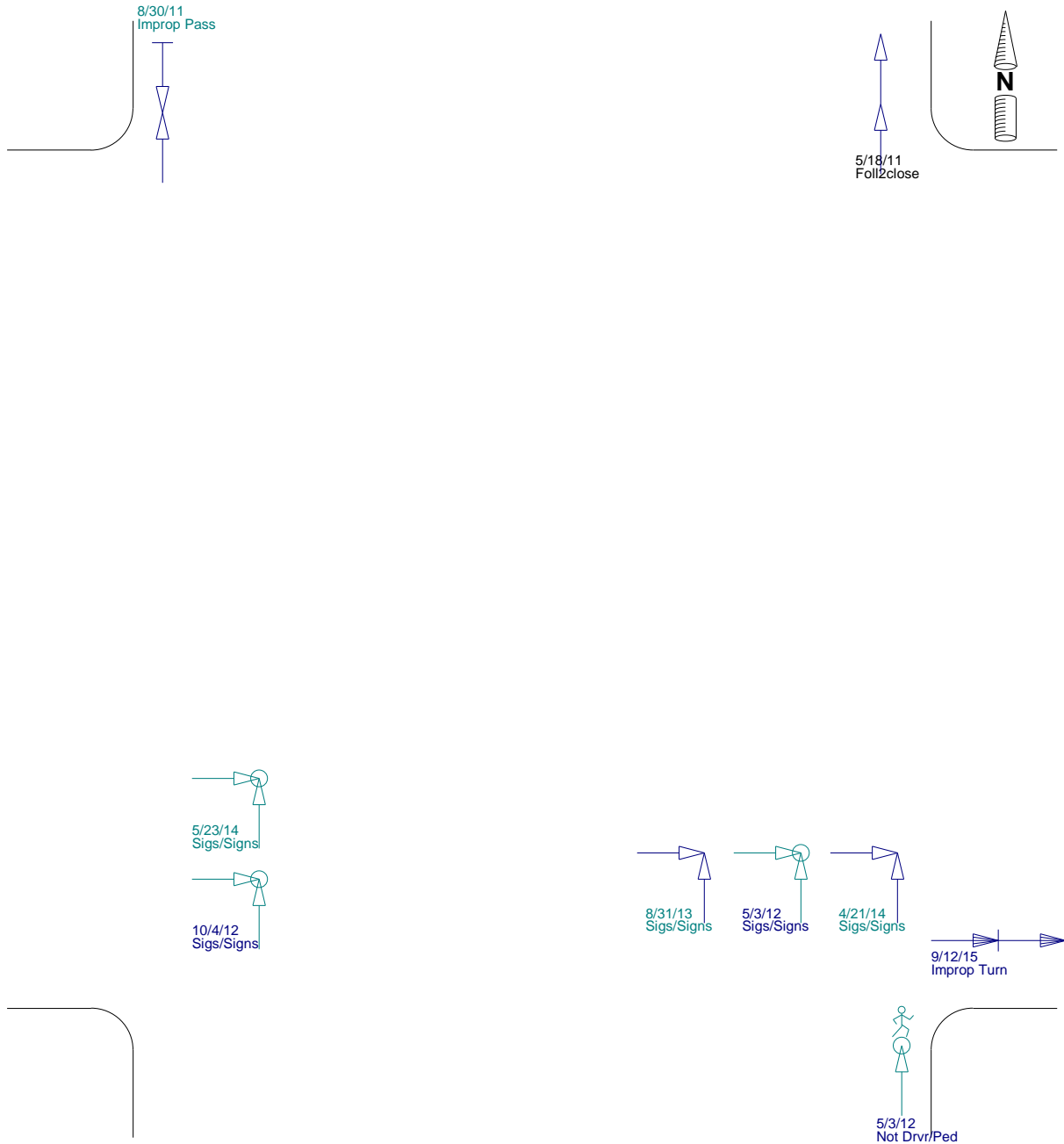
Collision Diagram

Horizontal Street: 9TH ST

Vertical Street: HARRISON ST

From: 1/1/2011 To: 12/31/2015

Date Prepared: 7/21/2016



Number of Collisions

5 Property Damage Only
4 Injury Collisions
0 Fatal Collisions
9 Total Collisions

Legend

Moving Vehicle
 Stopped Vehicle
 Backing Vehicle
 Ran Off Road
 Movement Unknown

Right Turn
 Left Turn
 Sideswipe
 Day
 Night

Pedestrian
 Fixed Object
 Bicycle
 DUI
 Injury
 Fatal

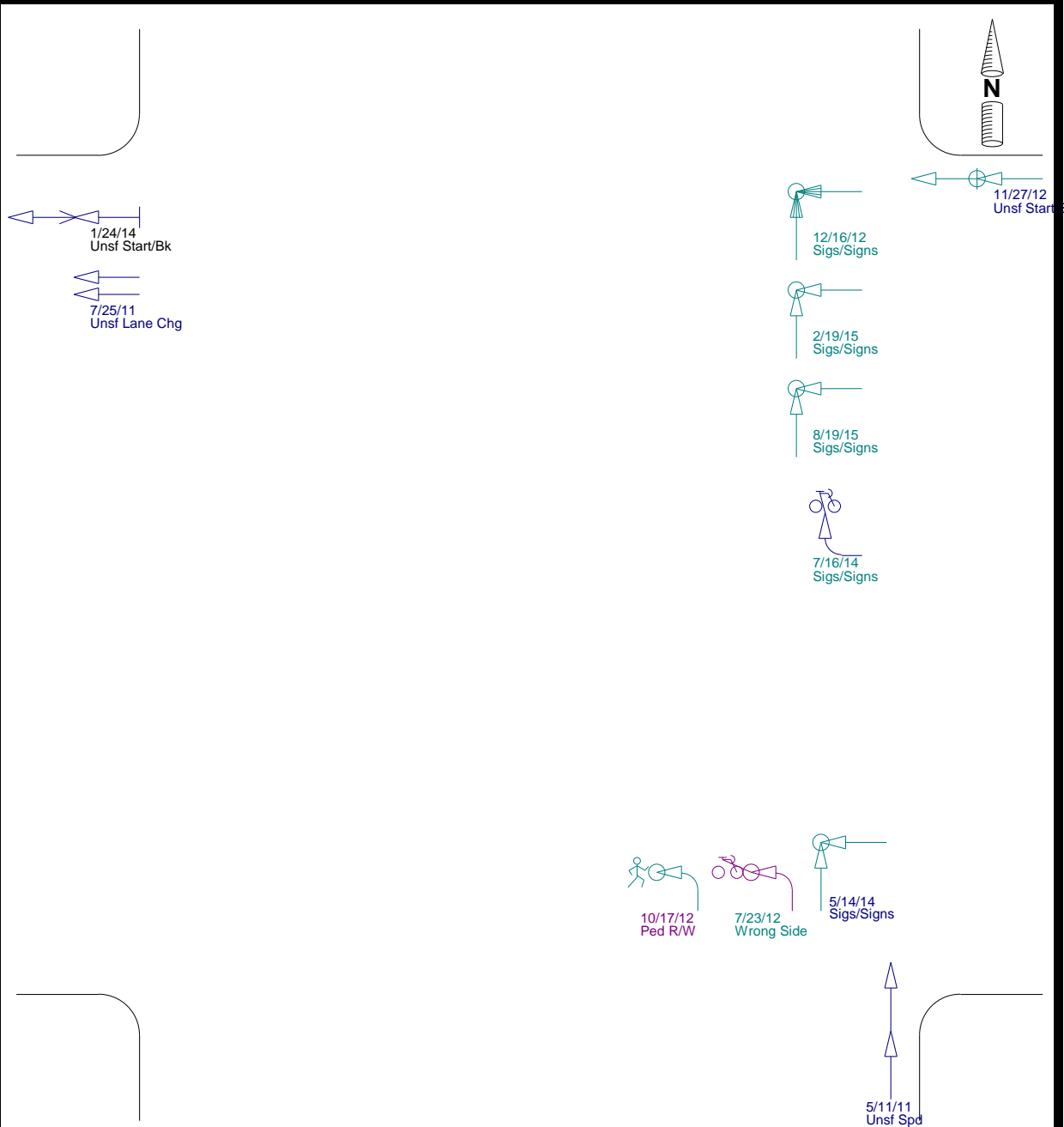
Collision Diagram

Horizontal Street: 8TH ST

Vertical Street: HARRISON ST

From: 1/1/2011 To: 12/31/2015

Date Prepared: 7/21/2016



Number of Collisions

4 Property Damage Only
7 Injury Collisions
0 Fatal Collisions
11 Total Collisions

Legend

Moving Vehicle
 Stopped Vehicle
 Backing Vehicle
 Ran Off Road
 Movement Unknown

Right Turn
 Left Turn
 Sideswipe
 Day
 Night

Pedestrian
 Fixed Object
 Bicycle
 DUI
 Injury
 Fatal

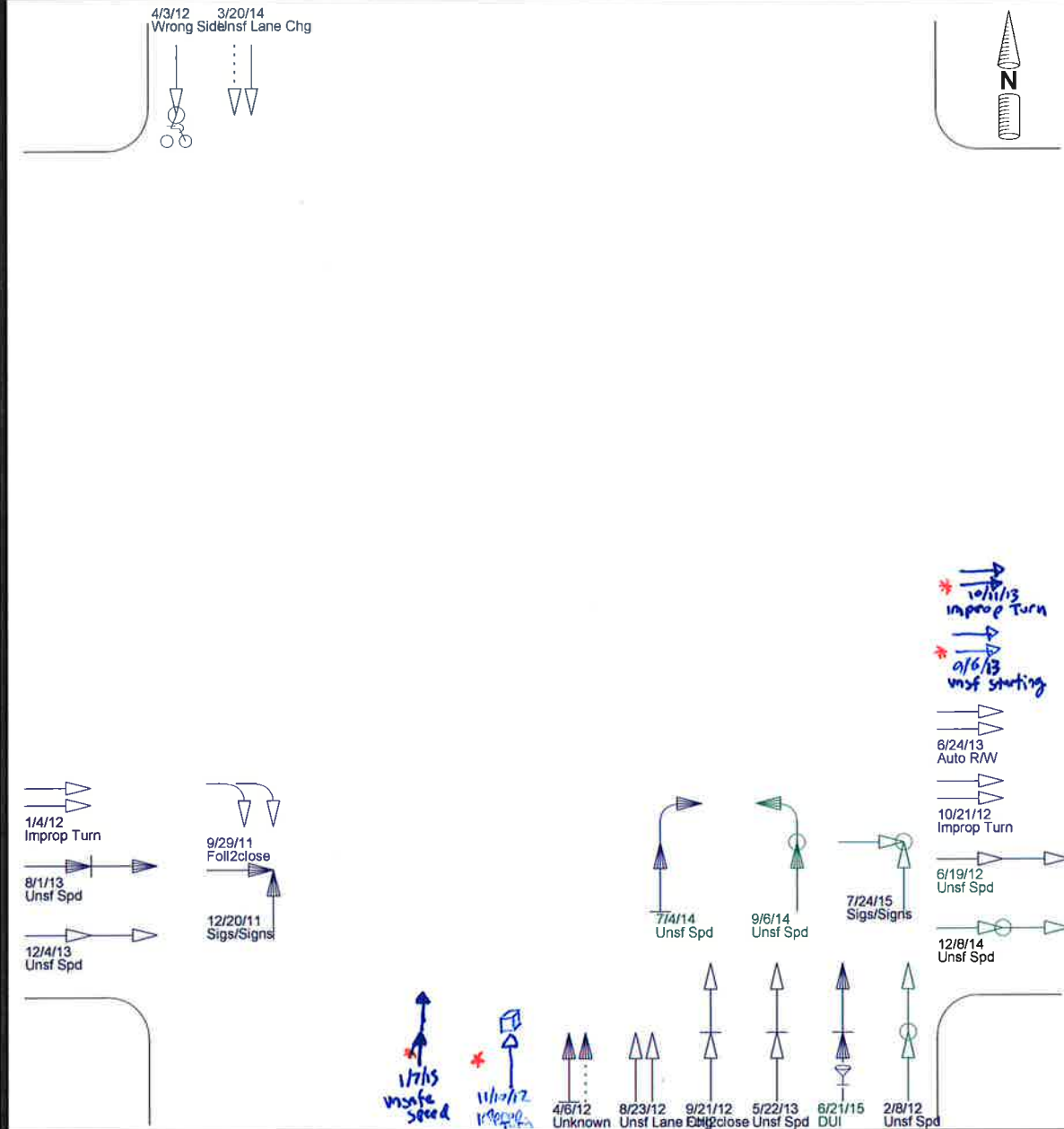
Collision Diagram

Horizontal Street: 7TH ST

Vertical Street: HARRISON ST

From: 1/1/2011 To: 12/31/2015

Date Prepared: 7/21/2016



Number of Collisions

15 Property Damage Only
5 Injury Collisions
0 Fatal Collisions
20 Total Collisions

Legend

Moving Vehicle
 Stopped Vehicle
 Backing Vehicle
 Ran Off Road
 Movement Unknown

Right Turn
 Left Turn
 Sideswipe
 Day
 Night

Pedestrian
 Fixed Object
 Bicycle
 DUI
 Injury
 Fatal

* Distance of crash from intersection is between 100' and 250'

04-Oakland-5

Collision Lists

Sorted by Intersection

City of Oakland
Traffic Engineering Department

7/20/2016	
Date Range Reported:	1/1/11 - 12/31/15
Total Number of Collisions:	162
Total Number of Property Damage Only:	104
Total Number of Complaint of Pain:	52
Total Number of Other Visible Injury:	4
Total Number of Severe Injury:	2
Total Number of Fatal:	0

Report Number	Date	Time	Location	Dist.	Dir.	Collision Type	Involved With	Dir. of Travel 1	Movement Preceding Collision 1	Dir. of Travel 2	Movement Preceding Collision 2	Primary Collision Factor	Highest Degree of Injury
5218094	6/28/2011	3:34 PM	7th St & Broadway	6'	West	Vehicle - Pedestrian	Pedestrian	East	Making Right Turn	North	Other	Ped R/W Violation	Other Visible Injury
5269917	7/16/2011	12:14 PM	7th St & Broadway	100'	West	Broadside	Parked Motor Vehicle	West	Backing	East	Parked	Unsafe Starting or Backing	Property Damage Only
5276767	8/23/2011	1:04 PM	7th St & Broadway	14'	East	Vehicle - Pedestrian	Pedestrian	South	Making Left Turn	South	Proceeding Straight	Ped R/W Violation	Other Visible Injury
5685201	5/25/2012	12:35 AM	Broadway & 7th St	0'	In Int.	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped in Road	Unsafe Speed	Property Damage Only
5690391	6/12/2012	11:24 AM	Broadway & 7th St	20'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped in Road	Following Too Closely	Complaint of Pain
5868363	9/17/2012	5:20 PM	Broadway & 7th St	30'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped in Road	Unsafe Speed	Property Damage Only
6113532	4/8/2013	4:15 PM	Broadway & 7th St	0'	In Int.	Broadside	Motor Vehicle on Other Roadway	North	Proceeding Straight	East	Proceeding Straight	Traffic Signals and Signs	Property Damage Only
6122123	6/17/2013	1:57 PM	7th St & Broadway	0'	In Int.	Sideswipe	Other Motor Vehicle	East	Making Left Turn	East	Proceeding Straight	Improper Turning	Complaint of Pain
6251025	7/19/2013	2:00 PM	7th St & Broadway	0'	In Int.	Sideswipe	Other Motor Vehicle	North	Making Right Turn	North	Slowing/Stopping	Unsafe Lane Change	Property Damage Only
6191203	7/27/2013	4:03 PM	Broadway & 7th St	15'	North	Hit Object	Fixed Object	North	Ran Off Road			Improper Turning	Property Damage Only
6342914	10/5/2013	12:52 PM	7th St & Broadway	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	Complaint of Pain
6360767	10/26/2013	11:55 AM	Broadway & 7th St	0'	In Int.	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Proceeding Straight	Unsafe Lane Change	Property Damage Only
6472614	1/13/2014	3:19 PM	7th St & Broadway	40'	West	Sideswipe	Other Motor Vehicle	East	Changing Lanes	East	Proceeding Straight	Unsafe Lane Change	Property Damage Only
6607909	6/8/2014	2:55 PM	Broadway & 7th St	12'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped in Road	Unsafe Speed	Property Damage Only
6589890	6/29/2014	7:58 PM	7th St & Broadway	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	East	Proceeding Straight	Traffic Signals and Signs	Complaint of Pain
6600602	7/4/2014	3:20 PM	7th St & Broadway	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	East	Proceeding Straight	Traffic Signals and Signs	Property Damage Only
6820955	12/11/2014	8:09 AM	7th St & Broadway	0'	In Int.	Broadside	Other Motor Vehicle	East	Proceeding Straight	North	Proceeding Straight	Unknown	Complaint of Pain
6821448	2/4/2015	1:26 PM	7th St & Broadway	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	East	Proceeding Straight	Traffic Signals and Signs	Complaint of Pain
7053980	6/29/2015	7:47 AM	7th St & Broadway	0'	In Int.	Broadside	Other Motor Vehicle	East	Proceeding Straight	South	Proceeding Straight	Traffic Signals and Signs	Complaint of Pain
7129395	9/21/2015	6:26 PM	Broadway & 7th St	0'	In Int.	Broadside	Other Motor Vehicle	East	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	Complaint of Pain
5187231	5/12/2011	2:15 PM	8th St & Broadway	20'	West	Vehicle - Pedestrian	Pedestrian	West	Making Left Turn	South	Other	Ped R/W Violation	Complaint of Pain
5219285	7/7/2011	2:30 PM	8th St & Broadway	40'	West	Sideswipe	Other Motor Vehicle	West	Proceeding Straight	West	Proceeding Straight	Improper Turning	Property Damage Only
5279995	8/27/2011	3:24 PM	Broadway & 8th St	50'	North	Sideswipe	Other Motor Vehicle	South	Parking Maneuver	South	Proceeding Straight	Unsafe Starting or Backing	Property Damage Only
5525809	11/29/2011	10:46 PM	Broadway & 8th St	25'	North	Other	Non-Collision	North	Proceeding Straight			Driving Under Influence	Property Damage Only
5466000	12/16/2011	1:11 PM	8th St & Broadway	20'	East	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Stopped in Road	Following Too Closely	Property Damage Only
5483521	1/6/2012	11:35 PM	Broadway & 8th St	10'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Speed	Property Damage Only
5783190	7/29/2012	12:22 AM	Broadway & 8th St	10'	North	Sideswipe	Other Motor Vehicle	South	Parking Maneuver	South	Making Right Turn	Unknown	Property Damage Only
5830685	10/8/2012	10:30 PM	Broadway & 8th St	0'	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	West	Proceeding Straight	Traffic Signals and Signs	Property Damage Only
5966816	10/13/2012	2:12 PM	8th St & Broadway	10'	East	Other	Pedestrian	East	Other	Not Stated	Not Stated	Unsafe Speed	Complaint of Pain
6198331	8/9/2013	2:15 PM	8th St & Broadway	200'	East	Sideswipe	Parked Motor Vehicle	West	Proceeding Straight	West	Parked	Unsafe Speed	Property Damage Only
6384138	11/9/2013	9:07 AM	8th St & Broadway	0'	In Int.	Sideswipe	Other Motor Vehicle	West	Changing Lanes	West	Proceeding Straight	Improper Turning	Property Damage Only

Report Number	Date	Time	Location	Dist.	Dir.	Collision Type	Involved With	Dir. of Travel 1	Movement Preceding Collision 1	Dir. of Travel 2	Movement Preceding Collision 2	Primary Collision Factor	Highest Degree of Injury
6448394	11/20/2013	10:30 AM	Broadway & 8th St	50'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Speed	Property Damage Only
6536726	5/20/2014	3:35 AM	Broadway & 8th St	0'	In Int.	Broadside	Other Motor Vehicle	West	Proceeding Straight	North	Proceeding Straight	Traffic Signals and Signs	Complaint of Pain
6579831	6/7/2014	2:07 AM	Broadway & 8th St	15'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped in Road	Unsafe Speed	Property Damage Only
6624363	6/13/2014	7:36 PM	8th St & Broadway	100'	West	Sideswipe	Parked Motor Vehicle	West	Making Right Turn	West	Parked	Improper Turning	Property Damage Only
7057548	7/14/2015	1:00 PM	Broadway & 8th St	115'	South	Vehicle - Pedestrian	Pedestrian	East	Backing	South	Not Stated	Ped R/W Violation	Complaint of Pain
5307734	5/15/2011	1:59 AM	9th St & Broadway	40'	East	Rear-End	Parked Motor Vehicle	East	Proceeding Straight	North	Parked	Driving Under Influence	Property Damage Only
5307415	7/29/2011	11:05 AM	Broadway & 9th St	20'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Slowing/Stopping	Unsafe Speed	Property Damage Only
5366326	9/24/2011	11:32 AM	Broadway & 9th St	0'	In Int.	Broadside	Bicycle	East	Proceeding Straight	South	Proceeding Straight	Traffic Signals and Signs	Complaint of Pain
5523503	12/24/2011	12:38 PM	9th St & Broadway	20'	East	Vehicle - Pedestrian	Pedestrian	West	Backing	North	Other	Unsafe Starting or Backing	Other Visible Injury
5634345	5/2/2012	3:32 PM	9th St & Broadway	36'	West	Other	Other Motor Vehicle	East	Backing	East	Stopped in Road	Unsafe Starting or Backing	Property Damage Only
5827126	7/23/2012	12:00 PM	Broadway & 9th St	20'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped in Road	Unsafe Speed	Property Damage Only
6489174	4/5/2014	4:46 PM	Broadway & 9th St	4'	South	Rear-End	Other Motor Vehicle	East	Proceeding Straight	North	Making Right Turn	Unsafe Starting or Backing	Property Damage Only
7057545	7/21/2015	11:08 AM	9th St & Broadway	0'	In Int.	Vehicle - Pedestrian	Pedestrian	North	Proceeding Straight	East	Not Stated	Ped R/W Violation	Complaint of Pain
5923237	4/14/2012	11:50 AM	Franklin St & 7th St	50'	North	Sideswipe	Parked Motor Vehicle	North	Other	North	Parked	Improper Turning	Property Damage Only
6181767	6/12/2013	5:15 PM	7th St & Franklin St	5'	West	Broadside	Bicycle	East	Making Right Turn	East	Proceeding Straight	Improper Turning	Other Visible Injury
5272726	8/13/2011	1:26 PM	Franklin St & 8th St	0'	In Int.	Vehicle - Pedestrian	Pedestrian	North	Proceeding Straight	West	Not Stated	Traffic Signals and Signs	Complaint of Pain
5325819	10/7/2011	11:30 AM	8th St & Franklin St	150'	East	Sideswipe	Other Motor Vehicle	West	Changing Lanes	West	Proceeding Straight	Unsafe Lane Change	Property Damage Only
5470585	12/30/2011	3:00 AM	8th St & Franklin St	100'	East	Rear-End	Parked Motor Vehicle	West	Proceeding Straight	West	Parked	Improper Turning	Property Damage Only
5945758	5/14/2012	8:40 AM	Franklin St & 8th St	50'	North	Rear-End	Other Motor Vehicle	South	Backing	North	Stopped in Road	Unsafe Starting or Backing	Property Damage Only
6157447	5/21/2013	6:45 PM	8th St & Franklin St	0'	In Int.	Broadside	Other Motor Vehicle	West	Making Right Turn	West	Proceeding Straight	Improper Turning	Property Damage Only
6406739	10/18/2013	11:52 AM	8th St & Franklin St	25'	East	Rear-End	Parked Motor Vehicle	West	Proceeding Straight	West	Parked	Unsafe Starting or Backing	Property Damage Only
6475151	12/15/2013	2:36 PM	8th St & Franklin St	200'	East	Sideswipe	Other Motor Vehicle	West	Stopped in Road	West	Proceeding Straight	Other Hazardous Movement	Property Damage Only
6440647	1/18/2014	10:58 AM	8th St & Franklin St	20'	East	Sideswipe	Parked Motor Vehicle	West	Proceeding Straight	West	Parked	Improper Turning	Property Damage Only
6630175	7/11/2014	6:04 PM	8th St & Franklin St	10'	East	Sideswipe	Parked Motor Vehicle	East	Making Right Turn	East	Parked	Unsafe Speed	Property Damage Only
6674843	8/8/2014	10:00 AM	8th St & Franklin St	222'	West	Head-On	Other Motor Vehicle	East	Backing	West	Stopped in Road	Unsafe Starting or Backing	Property Damage Only
6737238	8/25/2014	1:39 PM	8th St & Franklin St	75'	East	Sideswipe	Other Motor Vehicle	West	Entering Traffic	West	Proceeding Straight	Unsafe Starting or Backing	Property Damage Only
7057546	7/16/2015	9:00 AM	8th St & Franklin St	0'	In Int.	Vehicle - Pedestrian	Pedestrian	North	Making Left Turn	Not Stated	Other	Ped R/W Violation	Severe Injury
5182723	5/14/2011	6:40 PM	9th St & Franklin St	30'	East	Rear-End	Not Stated	West	Backing	Not Stated	Parked	Unsafe Starting or Backing	Property Damage Only
5223377	5/26/2011	4:08 PM	9th St & Franklin St	5'	West	Vehicle - Pedestrian	Pedestrian	North	Proceeding Straight	North	Proceeding Straight	Pedestrian Violation	Complaint of Pain
5316555	9/8/2011	10:08 AM	Franklin St & 9th St	40'	North	Rear-End	Other Motor Vehicle	North	Backing	North	Parked	Unsafe Starting or Backing	Property Damage Only
5424199	9/12/2011	1:00 PM	9th St & Franklin St	40'	West	Sideswipe	Parked Motor Vehicle	East	Changing Lanes	East	Stopped in Road	Improper Turning	Property Damage Only
5512766	2/29/2012	12:02 PM	Franklin St & 9th St	36'	South	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Stopped in Road	Unsafe Starting or Backing	Property Damage Only
5872025	10/29/2012	1:56 PM	Franklin St & 9th St	25'	North	Hit Object	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Following Too Closely	Complaint of Pain
6443348	2/28/2014	9:58 AM	9th St & Franklin St	52'	East	Hit Object	Not Stated	East	Parking Maneuver	East	Parked	Unsafe Starting or Backing	Property Damage Only
6526909	3/9/2014	1:05 PM	Franklin St & 9th St	50'	North	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Proceeding Straight	Improper Turning	Property Damage Only
6679213	7/14/2014	4:35 PM	9th St & Franklin St	60'	West	Other	Parked Motor Vehicle	East	Backing	East	Parked	Unsafe Starting or Backing	Property Damage Only
7069550	6/2/2015	1:29 PM	Franklin St & 9th St	30'	South	Sideswipe	Other Motor Vehicle	North	Making Right Turn	North	Making Right Turn	Improper Turning	Property Damage Only
5366371	9/29/2011	1:41 PM	Harrison St & 7th St	0'	In Int.	Rear-End	Other Motor Vehicle	East	Making Right Turn	East	Making Right Turn	Following Too Closely	Property Damage Only
5466009	12/20/2011	8:20 PM	Harrison St & 7th St	0'	In Int.	Broadside	Other Motor Vehicle	East	Proceeding Straight	North	Proceeding Straight	Traffic Signals and Signs	Property Damage Only
5458982	1/4/2012	1:46 PM	7th St & Harrison St	30'	West	Sideswipe	Other Motor Vehicle	East	Changing Lanes	East	Proceeding Straight	Improper Turning	Property Damage Only
5525463	2/8/2012	12:19 PM	Harrison St & 7th St	18'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Speed	Complaint of Pain
5580352	4/3/2012	5:40 PM	7th St & Harrison St	65'	East	Other	Bicycle	East	Proceeding Straight	South	Entering Traffic	Wrong Side of Road	Complaint of Pain
5577101	4/6/2012	8:14 PM	7th St & Harrison St	40'	West	Sideswipe	Parked Motor Vehicle	North	Other Unsafe Turning	North	Parked	Unknown	Property Damage Only
5762935	6/19/2012	7:25 AM	7th St & Harrison St	20'	East	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Slowing/Stopping	Unsafe Speed	Property Damage Only
5897616	8/23/2012	8:05 AM	Harrison St & 7th St	0'	In Int.	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Proceeding Straight	Unsafe Lane Change	Property Damage Only
5831722	9/21/2012	10:50 AM	Harrison St & 7th St	20'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped in Road	Following Too Closely	Property Damage Only
5895912	10/21/2012	11:50 AM	7th St & Harrison St	10'	East	Sideswipe	Other Motor Vehicle	East	Merging	East	Proceeding Straight	Improper Turning	Property Damage Only
5952211	11/10/2012	12:13 PM	Harrison St & 7th St	200'	South	Hit Object	Fixed Object	North	Proceeding Straight			Improper Turning	Complaint of Pain
6111294	5/22/2013	9:25 AM	Harrison St & 7th St	0'	In Int.	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped in Road	Unsafe Speed	Property Damage Only
6133379	6/24/2013	3:31 PM	7th St & Harrison St	15'	East	Sideswipe	Other Motor Vehicle	East	Merging	East	Proceeding Straight	Auto R/W Violation	Property Damage Only
6179344	8/1/2013	10:54 PM	7th St & Harrison St	0'	In Int.	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Stopped in Road	Unsafe Speed	Property Damage Only
6269762	9/6/2013	7:51 AM	7th St & Harrison St	125'	East	Sideswipe	Other Motor Vehicle	East	Proceeding Straight	East	Proceeding Straight	Unsafe Starting or Backing	Property Damage Only
6354410	10/11/2013	4:40 PM	7th St & Harrison St	150'	East	Sideswipe	Other Motor Vehicle	East	Merging	East	Proceeding Straight	Improper Turning	Complaint of Pain
6303698	12/4/2013	9:20 AM	Harrison St & 7th St	40'	West	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Slowing/Stopping	Unsafe Speed	Property Damage Only
6477923	3/20/2014	3:50 PM	Harrison St & 7th St	40'	West	Sideswipe	Other Motor Vehicle	South	Other	South	Proceeding Straight	Unsafe Lane Change	Property Damage Only

Report Number	Date	Time	Location	Dist.	Dir.	Collision Type	Involved With	Dir. of Travel 1	Movement Preceding Collision 1	Dir. of Travel 2	Movement Preceding Collision 2	Primary Collision Factor	Highest Degree of Injury
6597775	7/4/2014	12:41 AM	Harrison St & 7th St	0'	In Int.	Rear-End	Parked Motor Vehicle	North	Making Right Turn	North	Parked	Unsafe Speed	Property Damage Only
6758939	9/6/2014	1:47 AM	Harrison St & 7th St	90'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Making Left Turn	Unsafe Speed	Complaint of Pain
6766430	12/8/2014	1:28 PM	7th St & Harrison St	10'	East	Rear-End	Other Motor Vehicle	East	Merging	East	Merging	Unsafe Speed	Complaint of Pain
6848402	1/7/2015	5:38 PM	Harrison St & 7th St	200'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Speed	Complaint of Pain
7074647	6/21/2015	10:09 PM	Harrison St & 7th St	30'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped in Road	Driving Under Influence	Property Damage Only
7135974	7/24/2015	3:58 PM	7th St & Harrison St	0'	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	East	Proceeding Straight	Traffic Signals and Signs	Complaint of Pain
5180757	5/11/2011	9:45 AM	Harrison St & 8th St	30'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Slowing/Stopping	Unsafe Speed	Property Damage Only
5258053	7/25/2011	11:15 AM	8th St & Harrison St	50'	West	Sideswipe	Other Motor Vehicle	West	Proceeding Straight	West	Proceeding Straight	Unsafe Lane Change	Property Damage Only
5623949	7/23/2012	6:13 AM	8th St & Harrison St	7'	West	Broadside	Bicycle	South	Proceeding Straight	North	Making Left Turn	Wrong Side of Road	Severe Injury
5928427	10/17/2012	9:54 AM	Harrison St & 8th St	0'	In Int.	Vehicle - Pedestrian	Pedestrian	North	Making Left Turn	North	Stopped in Road	Ped R/W Violation	Complaint of Pain
5954488	11/27/2012	10:36 AM	Harrison St & 8th St	0'	In Int.	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Stopped in Road	Unsafe Starting or Backing	Complaint of Pain
5927776	12/16/2012	8:00 PM	8th St & Harrison St	0'	In Int.	Broadside	Not Stated	West	Proceeding Straight	North	Proceeding Straight	Traffic Signals and Signs	Complaint of Pain
6791494	1/24/2014	10:17 AM	8th St & Harrison St	50'	West	Other	Parked Motor Vehicle	West	Backing	West	Parked	Unsafe Starting or Backing	Property Damage Only
6514563	5/14/2014	2:25 PM	8th St & Harrison St	0'	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	West	Proceeding Straight	Traffic Signals and Signs	Complaint of Pain
6651560	7/16/2014	4:10 PM	8th St & Harrison St	5'	East	Other	Bicycle	West	Making Right Turn	South	Entering Traffic	Traffic Signals and Signs	Property Damage Only
6858252	2/19/2015	7:06 PM	Harrison St & 8th St	0'	In Int.	Broadside	Other Motor Vehicle	West	Proceeding Straight	North	Proceeding Straight	Traffic Signals and Signs	Complaint of Pain
7100686	8/19/2015	3:11 PM	8th St & Harrison St	0'	In Int.	Broadside	Other Motor Vehicle	West	Proceeding Straight	North	Proceeding Straight	Traffic Signals and Signs	Complaint of Pain
5189224	5/18/2011	8:38 AM	Harrison St & 9th St	65'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Slowing/Stopping	Following Too Closely	Property Damage Only
5296420	8/30/2011	12:38 PM	Harrison St & 9th St	100'	North	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	South	Stopped in Road	Improper Passing	Property Damage Only
5622981	5/3/2012	4:35 PM	9th St & Harrison St	0'	In Int.	Vehicle - Pedestrian	Pedestrian	North	Not Stated	North	Proceeding Straight	Other Than Driver or Ped	Complaint of Pain
5604244	5/3/2012	4:36 PM	9th St & Harrison St	0'	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	East	Proceeding Straight	Traffic Signals and Signs	Complaint of Pain
5955295	10/4/2012	10:32 AM	9th St & Harrison St	0'	In Int.	Broadside	Other Motor Vehicle	East	Proceeding Straight	North	Proceeding Straight	Traffic Signals and Signs	Complaint of Pain
6370592	8/31/2013	2:38 PM	9th St & Harrison St	0'	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	East	Proceeding Straight	Traffic Signals and Signs	Property Damage Only
6538752	4/21/2014	11:50 AM	9th St & Harrison St	0'	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	East	Proceeding Straight	Traffic Signals and Signs	Property Damage Only
6583552	5/23/2014	8:08 AM	Harrison St & 9th St	0'	In Int.	Broadside	Other Motor Vehicle	East	Proceeding Straight	North	Proceeding Straight	Traffic Signals and Signs	Complaint of Pain
7126395	9/12/2015	12:30 AM	9th St & Harrison St	30'	East	Rear-End	Parked Motor Vehicle	East	Proceeding Straight	East	Parked	Improper Turning	Property Damage Only
5333998	10/4/2011	8:34 AM	10th St & Harrison St	65'	East	Other	Other Motor Vehicle	West	Backing	East	Proceeding Straight	Unsafe Starting or Backing	Property Damage Only
5504043	2/3/2012	9:54 AM	10th St & Harrison St	0'	In Int.	Broadside	Other Motor Vehicle	West	Proceeding Straight	North	Proceeding Straight	Traffic Signals and Signs	Property Damage Only
5622097	4/20/2012	9:48 AM	Harrison St & 10th St	30'	South	Sideswipe	Other Motor Vehicle	South	Backing	South	Backing	Unsafe Starting or Backing	Property Damage Only
5945683	5/14/2012	7:10 AM	Harrison St & 10th St	0'	In Int.	Broadside	Other Motor Vehicle	West	Proceeding Straight	North	Proceeding Straight	Traffic Signals and Signs	Property Damage Only
6489182	3/8/2014	8:45 PM	10th St & Harrison St	0'	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	West	Making Right Turn	Traffic Signals and Signs	Complaint of Pain
6691782	8/27/2014	10:50 AM	10th St & Harrison St	0'	In Int.	Vehicle - Pedestrian	Pedestrian	West	Backing	South	Not Stated	Unsafe Starting or Backing	Complaint of Pain
6712207	8/28/2014	6:04 PM	10th St & Harrison St	100'	East	Rear-End	Other Motor Vehicle	West	Proceeding Straight	East	Backing	Unsafe Speed	Complaint of Pain
5269077	7/8/2011	9:00 AM	Webster St & 7th St	0'	In Int.	Sideswipe	Other Motor Vehicle	East	Proceeding Straight	East	Proceeding Straight	Other Hazardous Movement	Property Damage Only
5517965	1/17/2012	10:24 AM	7th St & Webster St	0'	In Int.	Vehicle - Pedestrian	Pedestrian	South	Making Left Turn	South	Not Stated	Ped R/W Violation	Complaint of Pain
5768692	9/12/2012	10:25 AM	7th St & Webster St	0'	In Int.	Vehicle - Pedestrian	Pedestrian	South	Not Stated	South	Making Left Turn	Pedestrian Violation	Complaint of Pain
5779540	9/18/2012	4:30 PM	Webster St & 7th St	0'	In Int.	Sideswipe	Bicycle	South	Proceeding Straight	South	Proceeding Straight	Improper Turning	Complaint of Pain
5937315	10/28/2012	10:03 PM	7th St & Webster St	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	East	Proceeding Straight	Traffic Signals and Signs	Property Damage Only
6104661	3/6/2013	7:14 PM	7th St & Webster St	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	East	Proceeding Straight	Traffic Signals and Signs	Property Damage Only
6133383	6/24/2013	9:05 AM	7th St & Webster St	240'	West	Sideswipe	Other Motor Vehicle	East	Proceeding Straight	East	Proceeding Straight	Unknown	Property Damage Only
6246037	7/3/2013	8:30 AM	7th St & Webster St	0'	In Int.	Sideswipe	Other Motor Vehicle	East	Proceeding Straight	East	Making Right Turn	Other Hazardous Movement	Property Damage Only
6316171	11/27/2013	10:15 AM	Webster St & 7th St	50'	North	Sideswipe	Other Motor Vehicle	South	Stopped in Road	South	Stopped in Road	Improper Turning	Property Damage Only
6415116	12/12/2013	1:43 PM	7th St & Webster St	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	East	Proceeding Straight	Traffic Signals and Signs	Complaint of Pain
6452504	12/26/2013	6:30 PM	7th St & Webster St	5'	East	Vehicle - Pedestrian	Pedestrian	South	Making Left Turn	South	Other	Ped R/W Violation	Complaint of Pain
6494720	4/20/2014	1:33 PM	Webster St & 7th St	100'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Slowing/Stopping	Unsafe Speed	Property Damage Only
6486906	5/13/2014	3:38 AM	7th St & Webster St	12'	West	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Stopped in Road	Unsafe Speed	Complaint of Pain
6644988	8/1/2014	5:15 PM	7th St & Webster St	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	East	Proceeding Straight	Traffic Signals and Signs	Complaint of Pain
6883229	9/1/2014	7:04 PM	Webster St & 7th St	10'	East	Broadside	Other Motor Vehicle	East	Proceeding Straight	South	Making Left Turn	Traffic Signals and Signs	Complaint of Pain
6813936	12/23/2014	1:45 PM	7th St & Webster St	0'	In Int.	Vehicle - Pedestrian	Pedestrian	South	Making Left Turn	Not Stated	Proceeding Straight	Ped R/W Violation	Complaint of Pain
7062408	7/9/2015	11:00 AM	Webster St & 7th St	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	South	Proceeding Straight	Improper Turning	Complaint of Pain
7053718	7/15/2015	2:00 PM	7th St & Webster St	20'	West	Other	Parked Motor Vehicle	West	Backing	East	Parked	Unsafe Starting or Backing	Property Damage Only
7070891	8/20/2015	6:28 PM	Webster St & 7th St	5'	West	Sideswipe	Other Motor Vehicle	East	Stopped in Road	South	Stopped in Road	Improper Turning	Property Damage Only
7135808	9/22/2015	7:45 AM	7th St & Webster St	0'	In Int.	Vehicle - Pedestrian	Pedestrian	South	Making Left Turn	South	Other	Ped R/W Violation	Complaint of Pain

Report Number	Date	Time	Location	Dist.	Dir.	Collision Type	Involved With	Dir. of Travel 1	Movement Preceding Collision 1	Dir. of Travel 2	Movement Preceding Collision 2	Primary Collision Factor	Highest Degree of Injury
7152252	10/28/2015	12:05 PM	7th St & Webster St	0'	In Int.	Vehicle - Pedestrian	Pedestrian	South	Making Left Turn	South	Proceeding Straight	Ped R/W Violation	Complaint of Pain
5228049	5/31/2011	5:10 PM	Webster St & 8th St	40'	North	Sideswipe	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Improper Turning	Property Damage Only
5308411	7/24/2011	12:45 AM	8th St & Webster St	25'	West	Sideswipe	Other Motor Vehicle	North	Making Left Turn	North	Proceeding Straight	Unsafe Lane Change	Property Damage Only
5465996	12/17/2011	12:40 PM	Webster St & 8th St	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	South	Making Right Turn	Other Hazardous Movement	Property Damage Only
5470521	12/26/2011	12:50 PM	8th St & Webster St	0'	In Int.	Broadside	Other Motor Vehicle	West	Proceeding Straight	West	Stopped in Road	Other Hazardous Movement	Property Damage Only
5517748	2/7/2012	7:08 AM	8th St & Webster St	0'	In Int.	Sideswipe	Other Motor Vehicle	West	Proceeding Straight	West	Making Left Turn	Improper Turning	Property Damage Only
5487484	2/8/2012	12:18 PM	Webster St & 8th St	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Making Right Turn	South	Making Right Turn	Improper Turning	Property Damage Only
5517744	2/12/2012	9:00 AM	8th St & Webster St	220'	East	Sideswipe	Other Motor Vehicle	West	Other Unsafe Turning	West	Parked	Improper Turning	Property Damage Only
5641381	5/7/2012	1:40 PM	8th St & Webster St	75'	East	Sideswipe	Parked Motor Vehicle	East	Backing	East	Parked	Unsafe Starting or Backing	Property Damage Only
5794574	7/26/2012	1:05 PM	8th St & Webster St	15'	West	Rear-End	Parked Motor Vehicle	West	Proceeding Straight	West	Parked	Unsafe Starting or Backing	Property Damage Only
5791859	8/30/2012	1:15 PM	8th St & Webster St	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Making Right Turn	South	Making Right Turn	Improper Turning	Property Damage Only
5870695	10/5/2012	9:20 AM	Webster St & 8th St	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Making Right Turn	South	Making Right Turn	Improper Turning	Property Damage Only
6384338	10/25/2013	10:02 AM	8th St & Webster St	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Making Right Turn	Improper Turning	Property Damage Only
6849281	1/19/2015	6:26 PM	Webster St & 8th St	4'	South	Vehicle - Pedestrian	Pedestrian	West	Not Stated	South	Making Left Turn	Pedestrian Violation	Complaint of Pain
7046914	5/15/2015	10:30 AM	8th St & Webster St	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	West	Making Right Turn	Improper Turning	Property Damage Only
7082927	6/8/2015	10:15 AM	Webster St & 8th St	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Making Left Turn	South	Making Left Turn	Improper Turning	Property Damage Only
7144267	9/8/2015	12:20 PM	8th St & Webster St	8'	East	Other	Other Motor Vehicle	West	Entering Traffic	South	Stopped in Road	Unsafe Starting or Backing	Property Damage Only
7137225	9/24/2015	11:25 AM	8th St & Webster St	10'	East	Sideswipe	Other Motor Vehicle	West	Proceeding Straight	West	Making Left Turn	Improper Turning	Property Damage Only
5288303	7/27/2011	1:15 PM	Webster St & 9th St	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Other	Other	Property Damage Only
5739407	7/17/2012	8:38 PM	Webster St & 9th St	10'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped in Road	Unsafe Speed	Complaint of Pain
5741096	7/18/2012	1:29 AM	9th St & Webster St	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Making Right Turn	East	Proceeding Straight	Improper Turning	Property Damage Only
5836684	9/10/2012	1:10 PM	9th St & Webster St	15'	West	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Stopped in Road	Following Too Closely	Property Damage Only
6585146	7/14/2014	11:25 AM	9th St & Webster St	120'	East	Sideswipe	Other Motor Vehicle	East	Parking Maneuver	East	Stopped in Road	Improper Turning	Property Damage Only

04-Oakland-5

Collision Summaries

Sorted by Runs

HSIP CYCLE 8 Call-for-projects CRASH DATA SUMMARY SHEET

Important: Read the Instructions to the right and [Appendix A of the application form instructions](#) before entering data. Do not enter data in shaded fields (with formulas).

Agency: City of Oakland	Application ID: 04-Oakland-5	
Prepared by: DKS Associates	Date: 8/5/2016	
Crash Data Period		for Benefit Calculation Run: 1 of 2 (e.g. 1 of 2)
From: 1/1/2011		CM No. for Countermeasure #1: S2 (e.g. NS20)
To: 12/31/2015		CM No. for Countermeasure #2:
		CM No. for Countermeasure #3:

No.	LOCATION * (Intersection Name or Corridor Limit)	Sub-dataset (select from list; blank if not a sub- dataset)	Fatal	Severe Injury	Other Visible Injury	Complaint of Pain	PDO	Total
1	Broadway and 9th St - All Crashes				1	2	5	
2	Broadway and 8th St - All Crashes					4	12	
3	Broadway and 7th St - All Crashes				2	8	10	
4	Franklin St and 9th St - All Crashes					2	8	
5	Franklin St and 8th St - All Crashes			1		1	10	
6	Franklin St and 7th St - All Crashes				1		1	2
7	Webster St and 9th St - All Crashes					1	4	5
8	Webster St and 8th St - All Crashes					1	16	17
9	Harrison St and 7th St - All Crashes					8	16	24
10	Webster St and 7th St - All Crashes					12	9	21
11	Harrison St and 8th St - All Crashes			1		6	4	11
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
Total**			0	2	4	45	95	146
Total (subset)**		Night	0	0	0	0	0	0
Total (subset)**		Ped&Bike	0	0	0	0	0	0
Total (subset)**		Emergency Vehicle	0	0	0	0	0	0
Total (subset)**		Animal	0	0	0	0	0	0

* Crash Total for each Location must match the total shown on the Crash Diagrams and Crash Lists

** Crash Totals highlighted in yellow will be entered in the Crash Data Table in the corresponding benefit calculation run in Excel Benefit Calculator.

HSIP CYCLE 8 Call-for-projects CRASH DATA SUMMARY SHEET

Important: Read the Instructions to the right and [Appendix A of the application form instructions](#) before entering data. Do not enter data in shaded fields (with formulas).

Agency: City of Oakland Prepared by: DKS Associates	Application ID: 04-Oakland-5 Date: 8/5/2016 for Benefit Calculation Run: 2 of 2 (e.g. 1 of 2) CM No. for Countermeasure #1: S2 (e.g. NS20) CM No. for Countermeasure #2: S7 CM No. for Countermeasure #3:
Crash Data Period From: 1/1/2011 To: 12/31/2015	

No.	LOCATION * (Intersection Name or Corridor Limit)	Sub-dataset (select from list; blank if not a sub- dataset)	Fatal	Severe Injury	Other Visible Injury	Complaint of Pain	PDO	Total
1	Harrison St and 9th St - All Crashes					4	5	
2	Harrison St and 10th St - All Crashes					3	4	
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
Total**			0	0	0	7	9	16
Total (subset)**		Night	0	0	0	0	0	0
Total (subset)**		Ped&Bike	0	0	0	0	0	0
Total (subset)**		Emergency Vehicle	0	0	0	0	0	0
Total (subset)**		Animal	0	0	0	0	0	0

* Crash Total for each Location must match the total shown on the Crash Diagrams and Crash Lists

** Crash Totals highlighted in yellow will be entered in the Crash Data Table in the corresponding benefit calculation run in Excel Benefit Calculator.

04-Oakland-5

Detailed Engineer's Estimate

Detailed Engineer's Estimate and Cost Breakdown by Countermeasure

For Construction Items Only

Important: before entering any data, read instructions in "Instructions" Tab and Appendix A of the Application Form Instructions.

Shaded fields (with formulas) are locked (read-only). Only enter data in fields with white background.

Agency:	City of Oakland	Application ID:	04-Oakland-5	Prepared by:	DKS Associates	Date:	8/10/2016								
Project Description:	Implementation of improvements at 13 intersections including mast arms, vehicle/bicycle detection, accessible pedestrian signal installation, and other improvements that have been shown to directly reduce injury and loss of life														
Project Location:	Intersections in Downtown Oakland in the area bounded by Broadway, 9th Street, Harrison Street, and 7th Street, also including the intersection of 10th Street and Harrison Street														
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	Unit	Unit Cost	Total	%	\$	%	\$	%	\$	%	\$	%	\$
1	Furnish & Install Polara Navigator Pedestrian Pushbutton	52	EA	\$1,800.00	\$93,600	70	\$65,520	30	\$28,080						
2	Furnish & Install Polara Central Control Unit in Cabinet	5	EA	\$2,200.00	\$11,000	60	\$6,600	40	\$4,400						
3	Furnish & Install Pedestrian Speaker	48	EA	\$400.00	\$19,200	100	\$19,200								
4	Remove & Salvage Existing Traffic Signal Pole and Traffic Signal Equipment. Trim Top 1-FT of Foundation	4	EA	\$2,500.00	\$10,000			100	\$10,000						
5	Furnish & Install LED Vehicle Signal Head - 3 sec 12"	66	EA	\$1,000.00	\$66,000	60	\$39,600	40	\$26,400						
6	Furnish & Install Signal Backplate	6	EA	\$250.00	\$1,500	30	\$450	70	\$1,050						
7	Furnish & Install LED IISNS on Mast Arm	27	EA	\$2,000.00	\$54,000	85	\$45,900	15	\$8,100						
8	Remove & Salvage Existing Vehicle Head	53	EA	\$250.00	\$13,250	80	\$10,600	20	\$2,650						
9	Upgrade Controller Cabinet and Assembly	2	EA	\$18,000.00	\$36,000	100	\$36,000								
10	Furnish & Install Video Detection Camera	5	EA	\$1,500.00	\$7,500	100	\$7,500								
11	Furnish & Install Pull Box #5	13	EA	\$700.00	\$9,100	75	\$6,825	25	\$2,275						
12	Furnish and install 2" conduit with backfill and trenching	130	LF	\$25.00	\$3,250	75	\$2,438	25	\$813						
13	Furnish & Install Type 24-3-100 Pole and Foundation	1	EA	\$9,000.00	\$9,000			100	\$9,000						
14	Furnish & Install Type 26-3-100 Pole and Foundation	3	EA	\$9,000.00	\$27,000			100	\$27,000						
15	Furnish & Install PPB Post and Foundation	12	EA	\$1,000.00	\$12,000	70	\$8,400	30	\$3,600						
16	Furnish & Install #14 Conductors	4720	LF	\$1.25	\$5,900	75	\$4,425	25	\$1,475						
17	Furnish & Install #8 Conductors	2700	LF	\$2.25	\$6,075	85	\$5,164	15	\$911						
18	Furnish & Install Video Coax Cable	500	LF	\$3.00	\$1,500	100	\$1,500								
19	Furnish & Install Video Power Cable	500	LF	\$3.00	\$1,500	100	\$1,500								

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	Unit	Unit Cost	Total	%	\$	%	\$	%	\$	%	\$	%	\$
20	Furnish & Install ADA Curb Ramp	4	EA	\$4,000.00	\$16,000			100	\$16,000						
21	Furnish & Install LED Countdown Pedestrian Signal Head	6	EA	\$1,000.00	\$6,000	100	\$6,000								
22														100	
23														100	
24														100	
25														100	
26														100	
27														100	
28														100	
29														100	
30														100	
Sub Total of Construction Items:					\$409,375		\$267,621		\$141,754						
% of "Construction Items only" Cost per Countermeasure (Yellow fields - To be entered in Application Form - Section III)						65% CM#1		35% CM#2		CM#3		(Other Safety)		(Non Safety)	
Construction Item Contingencies (% of Con Items i.e. enter 10 for 10%): Enter in the cell to the right				10%	\$ 40,938										
Total Construction Cost (Construction Items & Contingencies):					\$ 450,400	(Rounded up to the nearest hundreds)									

Select up to 3 CMs from the dropdown lists below. Use "Delete" key to delete.
Note: the CMs selected below must account for at least 15% of the construction cost per the above estimate.

CM#1:	S2,Improve signal hardware: lenses, back-plates, mounting, size, and number	(Select from Dropdown List)	CM Federal Funding Eligibility	100%
CM#2:	S7,Convert signal to mast arm (from pedestal-mounted)	(Select from Dropdown List)		100%
CM#3:	(No selection)	(Select from Dropdown List)		(No selection)

Maximum "HSIP/Total" percentage allowed for this project:	100%
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04-Oakland-5

Benefit Calculator Printouts

Sorted by Runs

HSIP Cycle 8 Call for Projects - Benefit Calculator

(Read instructions to the left. For more instructions please refer to Appendix A of the application form instructions)

All yellow-highlighted fields are required.

Application ID: **04-Oakland-5**

Calculation Run No. **1 of 2** (e.g. 1 of 2)

1. Countermeasures Utilized

(Select up to 3 countermeasures from the dropdown lists. At least one must be selected. Use CM#1 first then CM#2/CM#3.)

Countermeasure #1	S2-Improve signal hardware: lenses, back-plates, mounting, size, and number	▼
Countermeasure #2	(No selection)	▼
Countermeasure #3	(No selection)	▼

NOT required for this project:

The below information is **NOT** required since roundabout has **NOT** been selected as a countermeasure (S18/NS4A/NS4B).

Project location:	(Select from Dropdown List)
Intersection type:	(Select from Dropdown List)
Roundabout:	(Select from Dropdown List)

Average Daily Traffic (ADT)	Major Road	Minor Road	Total ADT
	-	-	-

2. Crash Data

From	1/1/2011	(required)
To	12/31/2015	(required)
Number of Years	5.00	(must be between 3 and 5).

Crash Data Table (data sets or rows highlighted in yellow are required as they are related to the selected countermeasures)

Dataset / Sub-dataset	Fatality	Severe Injury	Injury - Other Visible	Injury - Complaint of Pain	Property Damage Only	Total
All	0	2	4	45	95	146
Night	0	0	0	0	0	0
Ped & Bike	0	0	0	0	0	0
Emergency Vehicle	0	0	0	0	0	0
Animal	0	0	0	0	0	0

3. Results - Benefits by Countermeasures


(Enter these results in Sheet "Benefit Summary" if this project has multiple benefit calculation runs)

	CM ID	Crash Dataset / Sub-dataset Applied	Crash Reduction Factor (CRF)	Life (Years)	Life benefits
Countermeasure #1	S2	All	15%	10	\$1,998,870
Countermeasure #2	(Not Selected)	(N/A)	0%	-	\$0
Countermeasure #3	(Not Selected)	(N/A)	0%	-	\$0

Total Benefits **\$1,998,870**

Safety Practitioner/Engineer (Print):

Signature:



Date:

8/12/2016

By signing this benefit calculation sheet, 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.

HSIP Cycle 8 Call for Projects - Benefit Calculator

(Read instructions to the left. For more instructions please refer to Appendix A of the application form instructions)

All yellow-highlighted fields are required.

Application ID: **04-Oakland-5**

Calculation Run No. **2 of 2** (e.g. 1 of 2)

1. Countermeasures Utilized

(Select up to 3 countermeasures from the dropdown lists. At least one must be selected. Use CM#1 first then CM#2/CM#3.)

Countermeasure #1	S2-Improve signal hardware: lenses, back-plates, mounting, size, and number
Countermeasure #2	S7-Convert signal to mast arm (from pedestal-mounted)
Countermeasure #3	(No selection)

NOT required for this project:

The below information is **NOT** required since roundabout has **NOT** been selected as a countermeasure (S18/NS4A/NS4B).

Project location:	(Select from Dropdown List)
Intersection type:	(Select from Dropdown List)
Roundabout:	(Select from Dropdown List)

Average Daily Traffic (ADT)	Major Road	Minor Road	Total ADT
	-	-	-

2. Crash Data

From	1/1/2011	(required)
To	12/31/2015	(required)
Number of Years	5.00	(must be between 3 and 5).

Crash Data Table (data sets or rows highlighted in yellow are required as they are related to the selected countermeasures)

Dataset / Sub-dataset	Fatality	Severe Injury	Injury - Other Visible	Injury - Complaint of Pain	Property Damage Only	Total
All	0	0	0	7	9	16
Night	0	0	0	0	0	0
Ped & Bike	0	0	0	0	0	0
Emergency Vehicle	0	0	0	0	0	0
Animal	0	0	0	0	0	0

3. Results - Benefits by Countermeasures

(Enter these results in Sheet "Benefit Summary" if this project has multiple benefit calculation runs)

	CM ID	Crash Dataset /Sub-dataset Applied	Crash Reduction Factor (CRF)	Life (Years)	Life benefits
Countermeasure #1	S2	All	15%	10	\$155,730
Countermeasure #2	S7	All	30%	20	\$576,201
Countermeasure #3	(Not Selected)	(N/A)	0%	-	\$0

Total Benefits \$731,931

Safety Practitioner/Engineer (Print):

Signature:



Date:

8/12/2016

By signing this benefit calculation sheet, 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.

Summary of Benefits by Countermeasures
for combining benefits from multiple benefit calculation runs
(see Appendix A of the application form instructions)

Note: Do not enter in yellow fields (with formulas).

Application ID: 04-Oakland-5 (same as in Application Form, e.g. 03-Sacramento-1)

	CM #1	CM #2	CM#3
CM No. (e.g. NS3, R2, etc)	S2	S7	
	CM #1 Benefit (\$)	CM #2 Benefit (\$)	CM #3 Benefit (\$)
Calculation Run #1	\$ 1,998,870		
Calculation Run #2	\$ 155,730	\$ 576,201	
Calculation Run #3			
Calculation Run #4			
Calculation Run #5			
Calculation Run #6			
Calculation Run #7			
Total	\$ 2,154,600	\$ 576,201	\$ -

(The totals are to be entered in Section IV of the Application Form)